MacWEEK

9 January 1990 Vol. 4 No. 1 WORKSTATION NEWS

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System 7 bonus: Mac FileShare

By John Battelle

Cupertino, Calif. — A more detailed view of System 7.0 is emerging as Apple seeds prototypes of its dramatically new system software to key Macintosh developers.

As reported earlier (see MacWEEK, Dec. 12, 1989), Apple last month announced a timetable and list of "core technologies" that would be included in System 7's initial release, now scheduled for this summer.

Most surprising in the list of included technologies is Macintosh FileShare, known as "Personal AppleShare" while under wraps at Apple. Mac FileShare is distributed file sharing software that does not require a dedicated server and is accessible by any Mac.

FileShare has been described by one developer familiar with the project as "essentially AppleShare running in the background without a central server." Any computer with AppleShare client software can connect to FileShare, according to Chris Espinosa, system software product marketing manager for Apple USA. Any third-

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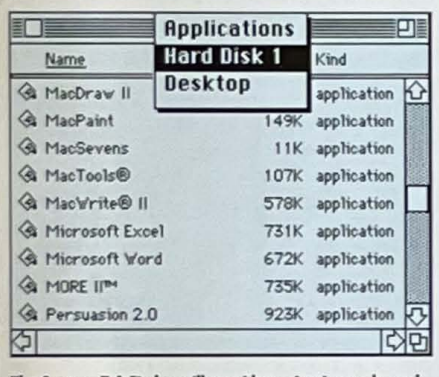

The System 7.0 Finder will provide navigation tools, such as a Find option in the Edit menu and pop-up menus that display the path name of a window or files.

Bad-news bears spoil Apple Xmas

Dealers get price break on SE, SE/30

By Pamela Pfiffner

San Francisco — In an apparent bid to boost second-quarter sales, Apple lowered prices to its dealers on Mac SE and SE/30 computers on Dec. 31. Suggested retail prices, however, remain unchanged.

According to sources familiar with the price reductions, the expanded dealer margins will remain in effect through March 31, the end of Apple's 1990 second fiscal quarter. At that time Apple will lower the suggested retail price of the Mac SE and SE/30 without reducing further the cost to dealers.

The cut lowers the dealer cost of the single-floppy SE, which has a suggested retail price of $2,869, by $189. Reseller sources said the new pricing should bring the street price of the SE down to about $1,800. For an SE with a 20-Mbyte hard disk and an extended keyboard, the cut will amount to $315.

The dealer price for a base SE/30, which lists for $4,369, has dropped by $325. For fully loaded machines the price cut was larger: The dealer price of an SE/30 with an 80-Mbyte hard disk, 4 Mbytes of RAM and an extended keyboard, for example, was reduced by $650.

One dealer, who asked to remain unidentified, said, "I don't know if this is meant to be an incentive to the end user or an opportunity for the dealer. I don't know why they're doing it."

Apple declined to comment. □

Black December

- **Dec. 11:** Goldman, Sachs revises Apple earnings estimate and drops Apple stock from the "buy" recommendation to "hold"
- **Dec. 12:** Apple announces that fiscal first-quarter earnings will be below expectations
- **Dec. 14:** Xerox Corp. files suit against Apple, claiming Mac interface unlawfully incorporates "material" developed by Xerox
- **Dec. 15:** Apple stock reaches all-time low for the year
- **Dec. 27:** New York Times headline: Apple Strays From Mass Appeal

Low-end lag shakes Wall Street confidence

By Connie Guglielmo

Cupertino, Calif. — December was anything but a holiday for Apple as the company dealt with declining sales of its lower-end machines, a lawsuit challenging its copyright to the Mac interface, and investment analysts' predictions that the company is slipping behind in the personal computer market.

The bad news started rolling in when Daniel Benton of Goldman, Sachs in New York reduced his earnings estimate by 17 percent, from $4.50 per share to $3.75, and downgraded the stock from a "buy" recommendation to "hold."

Apple followed up with an announcement Dec. 12 that earnings for the first quarter of fiscal 1990, which ended Dec. 29, would be below expectations.

Two days later, Xerox Corp. filed suit against the company, charging that the Apple's Lisa and Mac interfaces unlawfully incorporated "material" developed by Xerox (see story, this page).

Apple cited several factors for the lower-than-anticipated sales results for the quarter, including declining unit sales of its low-end machines, the Mac Plus, Mac SE and Apple II, and an inability to ramp up production of the Macintosh Portable because of an inadequate supply of the machine's unique screen display.

"Generally in the holiday season we see a surge in sales, ... but this year we're not seeing the seasonal growth that we had expected at the low end," Apple spokeswoman

See Sales, Page 8

Claris invests in Wingz code for future apps

By John Battelle

Santa Clara, Calif. — Claris Corp. last month signed an agreement with Informix Software Inc. to acquire key spreadsheet and graphics technology from the Lenexa, Kan.-based company, sources close to both companies said.

Claris of Santa Clara, Calif., may eventually use the Informix technology to create a spreadsheet of its own, a product that is missing from its suite of Macintosh business applications. Initially, however, Claris is expected to incorporate the technology into other existing and future applications.

Last year, Claris purchased word processing technology from Denver-based Quark Inc. Claris also acquired two of its current applications, FileMaker and SmartForms, from outside developers.

Informix plans a suite of announcements regarding licensing technology and the future of its product line this week. Sources said that Informix plans to make Wingz, its graphical spreadsheet for the Macintosh, into a single

See Informix, Page 9

Time lapse may scuttle Xerox claim

By Carolyn Said

San Francisco — Some of the murky issues surrounding intellectual-property law could finally be resolved if Xerox's belated lawsuit against Apple ever makes it to court. Legal experts cautioned, however, that the case could run aground on legal technicalities.

The $150 million suit, filed last month in the Federal District Court here, seeks cancellation of Apple's copyrights on the Lisa and Macintosh Finder on the grounds that Apple copied and failed to acknowledge innovations developed for Xerox's Star computer system, which debuted in 1981 (see sidebar, Page 9).

Legal analysts speculated that Xerox resorted to the somewhat-unusual legal maneuver of attacking Apple's copyrights, rather than claiming copyright infringement, to sidestep the issue of why it has waited so long to press its suit.

"It's never a good idea in any intellectual-property case to sit around so long," said Jack Russo, an intellectual-property lawyer in Palo Alto, Calif. "Intellectual property is like vapor: It escapes into the atmosphere rapidly."

The time elapsed was not lost on Apple. "We found it somewhat curious that it had been more than seven years since the Lisa was

See Xerox, Page 9

KEVIN BERGER

LATE NEWS

Miniscribe ships bricks, seeks protection

Longmont, Colo. — Drive manufacturer Miniscribe Corp. last week filed for Chapter 11 bankruptcy protection, saying its liabilities exceed its assets by $151 million. The move comes three months after an independent evaluation committee appointed by the company's directors charged that management, including Silicon Valley "turnaround artist" Q.T. Wiles, "perpetrated a massive fraud," even shipping bricks as disk drives. □

TypeStyler updated for Adobe fonts

San Rafael, Calif. — Just weeks after shipping TypeStyler, its long-awaited type manipulation package, Broderbund Software is releasing an upgrade that will support Adobe Type 1 encrypted fonts. TypeStyler 1.01, priced at $199, is due at midmonth, the company said. Existing TypeStyler owners can upgrade by calling Broderbund at (800) 521-6263. □

NEWSPAPER SECOND CLASS

ColorMAX 8/24. It goes from 8 to 24 bits in $500 flat.

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SIGMA DESIGNS

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Aapps' MicroTV hits store shelves

Sunnyvale, Calif. — Aapps Corp. is now shipping MicroTV, a $399 board for Mac II machines that brings live video to the Mac screen.

MicroTV's on-board tuner receives signals from video devices, including cameras, VCRs and TV sets, and displays them in real time in a window on the Mac screen. Images are displayed with up to 128 gray levels in a window 128 by 108 pixels in size. Frames can be captured to the Clipboard in PICT2 format by pressing the space bar.

Aapps originally planned for MicroTV to be cable-ready, but the company was unable to get the necessary tuner, according to Louise Kohl, public relations manager. Users who want to view cable stations must plug the board into the converter box supplied by the cable company.

Aapps Corp. is located at 756 N. Pastoria Ave., Sunnyvale, Calif. 94086; (408) 735-8550. □

Aldus offers users help options

Seattle — Aldus Corp. last month announced CustomerFirst, an expanded support program for owners of its products.

Aldus users will now be entitled to 90 days of non-toll-free telephone technical support, up from 45 days.

For long-term support, Aldus' Extended Technical Support Service (ETSS) has been divided into two levels. Level 1, for which the company will charge $89 per product per year, includes toll-free telephone support, a 25 percent discount on new releases and free minor updates.

Level 2, at $149 per product per year, includes toll-free telephone support, a 40 percent discount on new releases, free minor updates and free copies of Aldus technical notes and Filter/Driver Packs.

Aldus customers whose 90-day warranty has elapsed and who don't wish to subscribe to ETSS can call a special 900 number with technical questions for $15 per call.

Aldus Corporate Services, priced at $1,000 a year, offers technical support, several training options and Aldus technical notes, as well as reduced rates on new releases, free minor updates, a subscription to Aldus Magazine and a 50 percent discount on advertisements bought in the magazine.

Aldus Corp. is located at 411 1st Ave. S., Seattle, Wash. 98104; (206) 628-2352. □

FullWrite bundled with memory

Austin, Texas — Buy 4 Mbytes of memory for $350 and get a free copy of FullWrite Professional. That's the bundle introduced this week by software publisher Ashton-Tate Corp. and Technology Works, a leading supplier of memory upgrades. FullWrite alone retails for $395. It is also available for $39 with a $175 2-Mbyte kit. The software is Version 1.0, but up-zgrades to the current Version 1.1 are free.

Bundles are available through Technology Works, 4030 Braker Lane W., Suite 350, Austin, Texas 78759; (800) 622-2210. □

Ashton-Tate expands support plan

Torrance, Calif. — Ashton-Tate Corp. last week announced that users of its software can now get unlimited technical support free of charge, aside from phone-company tolls. Previously, the company offered only 90 days of free support.

The new policy applies to all Ashton-Tate products except advanced packages and connectivity offerings such as SQL Server. Macintosh products will have a special number: (213) 768-1703.

The company also has revamped its fee-based priority service programs. Under a new three-tiered program called Ashton-Tate Assist, toll-free service and other benefits will be available at prices ranging from $150 to $595 per year. In addition, customers will now have toll-free access to the company's support bulletin board system via CompuServe. □

Connect increases on-line rates

Cupertino, Calif. — Connect Inc. last month posted a rate increase for users of its on-line information service.

Effective Jan. 1, users of the Connect Business Information Network are billed $10 per hour during peak connect time (7 a.m. to 7 p.m. local time), up from $8 per hour. Off-peak use will cost $5 per hour, up from $4 per hour.

Connect users also will pay 3 cents for each kilocharacter (1,000 characters) of data transferred during peak time and 2 cents per kilocharacter during off-peak time. Previously, the first 2 kilocharacters transferred per minute were free. □

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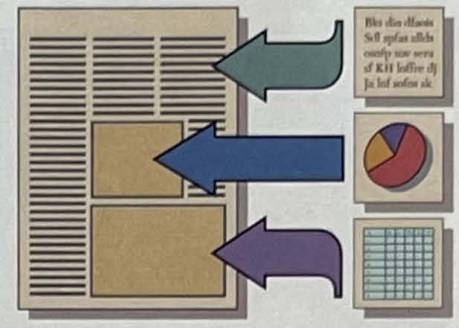

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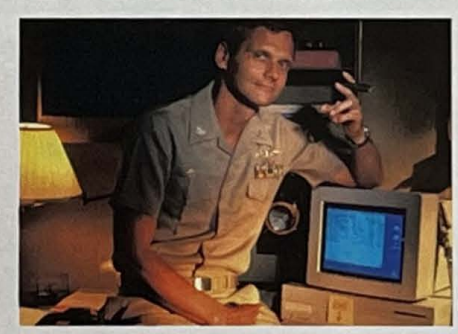

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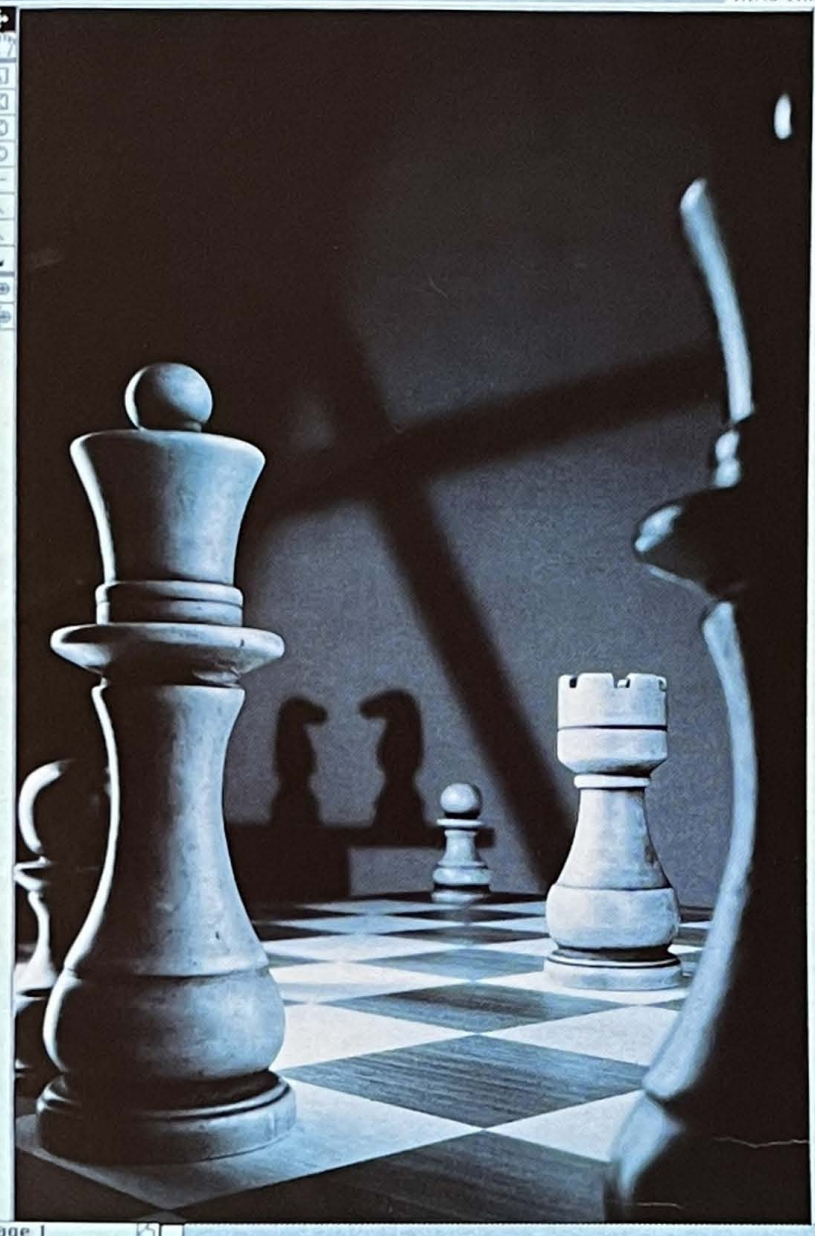

KIN

STRATE

To some it was just a game.
intricate game composed of sub
moves, sublime suggestions,
intricate defenses. To him, it wa
paradigm of life. An ever shift
pattern. Of Victory and Defeat. E
game unique. Each game a bitt
sweet experience. He studied Sun T
He read Clausewitz. He explo
Napoleon. He marvelled at
Masters. He never stopped learn
He played his opponent as closely
some would hold a lover. He pla
the clock as if his life depended
hitting the button five seconds un
the allotted time.
They called him the
King of Strategy. He
called himself a
Student of Life.

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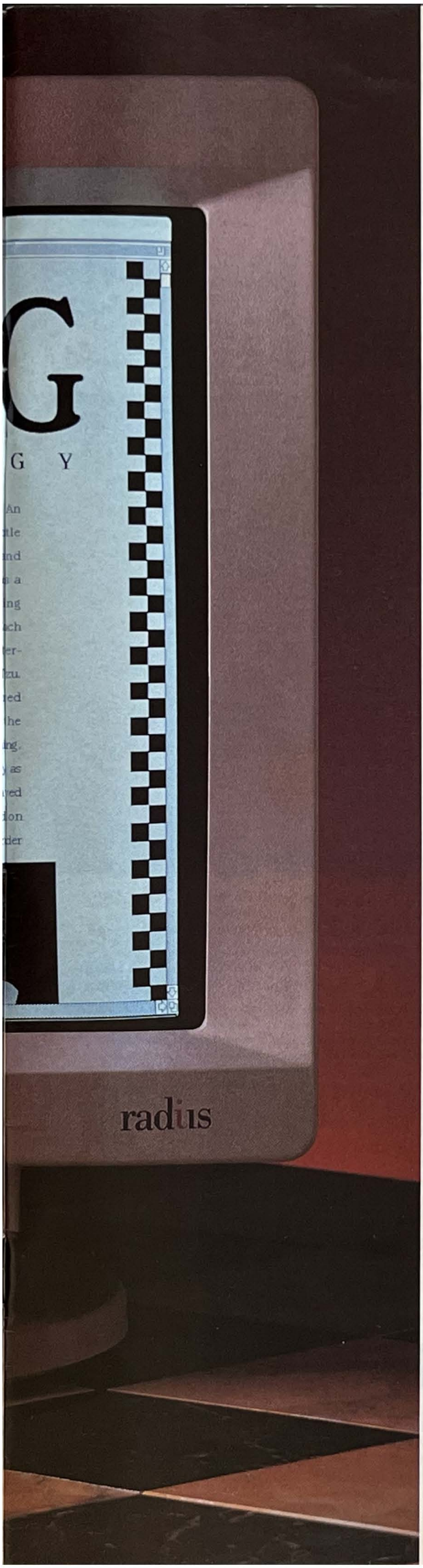

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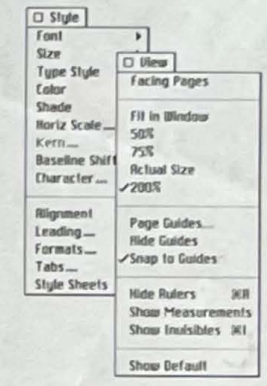
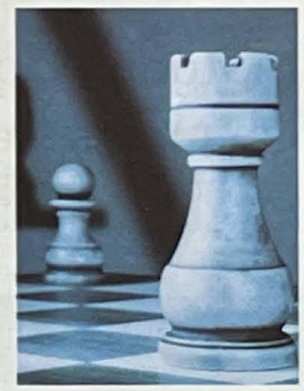


Tear-off Menus



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Letraset upgrades LetraStudio 1.5

FontStudio set for release this month

By Pamela Pfiffner

Paramus, N.J. — Completing its Studio line of graphic arts software, Letraset has updated LetraStudio 1.5, its type manipulation package, and will this month release FontStudio, a new font creation and editing program.

LetraStudio 1.5 now lets users modify and enhance PostScript Type 3 (unencrypted) fonts from such vendors as URW, Bitstream and Agfa Compugraphic in addition to Letraset's proprietary LetraFonts typefaces. The $495 package is shipping now.

LetraStudio files can now be saved in Adobe Illustrator 1.1 and PICT formats as well as Encapsulated PostScript. The new version also permits modification of objects created with FontStudio and Altsys Corp.'s Fontographer font creation program.

FontStudio, scheduled to ship Jan. 22, is a type design program for creating and editing fonts and logos. Users can create hinted or unhinted fonts from scratch, or add hinting to existing typefaces. The program includes kerning tables where users can specify font metrics, side bearings and kerning pairs.

Richard Ware, a font designer for Casady & Greene of Carmel, Calif., and a FontStudio beta tester, said that FontStudio's kerning capabilities are "more involved and powerful" than those of Fontographer, which he also uses.

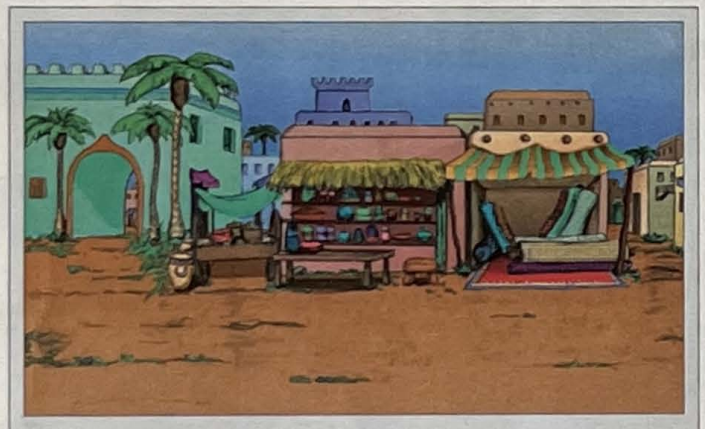
"I can build a set of text samples for comparison with test kerning samples. Then you can drag letters for kerning placement quickly rather than creating one pair at a time," said Ware, adding that he creates 500 or more kerning pairs at a time. "It provides you with more options to create pairs and automates the process as well."

The $595 program includes an autotrace feature for converting bit-mapped images in Paint, TIFF and PICT formats into editable objects. It supports high-resolution, gray-level and color bit-map fonts and produces screen bit-map and printer outline fonts.

Letraset is offering three rebate programs, which run until Jan. 31, for users wishing to purchase Studio line products. Registered owners of the company's Ready,Set,Go! desktop publishing program and its Standout! presentation package can receive a $100 rebate on each of the five Studio applications. These include LetraStudio, FontStudio, ColorStudio, DesignStudio and ImageStudio.

Users of Ready,Set,Go! 4.5 may upgrade to the $795 DesignStudio by sending in their Ready,Set,Go! manual and original program disk plus $325. Users of Aldus PageMaker and QuarkXPress can receive a $100 rebate on DesignStudio by sending in the sales receipt and the manual cover from their PageMaker or QuarkXPress software packages and the completed registration card of DesignStudio.

Letraset is located at 40 Eisenhower Drive, Paramus, N.J. 07653; (201) 845-6100. □



Letraset's ColorStudio lets users create and manipulate images in 32-bit color. Its features include tools for built-in color correction, mask creation, special effects and image editing.

DesignStudio, ColorStudio get high marks from users

Early users sketched glowing portraits of DesignStudio and ColorStudio, the first two of Letraset's portfolio of electronic design tools to reach users last month.

The $795 DesignStudio page-layout program offers a choice between the pasteboard metaphor used by PageMaker from Seattle-based Aldus Corp. or a coordinate system similar to that of QuarkXPress from Denver-based Quark Inc.

"I feel that [DesignStudio] combines the best of both programs," said Patty Smith, a production designer at Apple.

Smith, who produced Apple's 1989 annual report with DesignStudio, said she appreciated the program's freedom to move objects around without constraints, its typographic controls, and its ability to rotate objects and type.

"DesignStudio gives you a lot of controls but still gives you some freedom to kind of mess around," said Michael Meyerowitz, a New York-based designer, adding that he found it useful for design as well as layout.

ColorStudio, a $1,995 color image creation and enhancement package, "is much more intuitive than any other Macintosh paint program," said Sharon Steuer, a computer artist in Bethany, Conn.

"I find the color correction function really beautiful. To be able to take an image in any state and make global subtle changes in the way ColorStudio allows you to is very powerful," she said.

Steuer, who is writing an artist's tutorial for the product, said she would like to see its interface more dedicated to graphics tablet input.

"I do more special effects, airbrushing and retouching with ColorStudio than I did with Scitex (a high-end pre-press system)," said Edgar Guttzeit, a New York-based designer.

Guttzeit cited ColorStudio's color correction abilities, masking, ability to compress images for storage, and visual displays of color values as outstanding features. He said he would like to see the program add the ability to open more file types. — *By Carolyn Said*

Abbott releases new CanOpener

Pleasantville, N.Y. — Abbott Systems Inc. last week released a new version of CanOpener, a desk accessory and application package that lets users read and search text, view pictures and play sounds from virtually any kind of Mac file.

Version 1.1 searches text 200 percent to 300 percent faster than the original release, the company said, and allows text and graphics to be printed directly from CanOpener. It also lets users view graphics saved in several additional formats — TIFF, RIFF (the format used by Letraset's ImageStudio) and MacDraw II's native (DRWG) format — as well as the Paint, PICT, PICT2, icon and Encapsulated PostScript formats previously supported.

Upgrades to the $125 utility will be mailed free to registered owners.

Abbott Systems Inc. is located at 62 Mountain Road, Pleasantville, N.Y. 10570; (914) 747-3116. □

Dantz adds new SCSI capabilities to Retrospect

By Henry Norr

Berkeley, Calif. — Dantz Development Corp. last week released a major update of Retrospect, its archival and backup software package.

Version 1.1 of the $295 program, which already worked with a wide variety of storage media, adds support for Exabyte 8mm videocassette drives, for all currently shipping DAT (digital audio tape) drives, and for the 3M MCD Series II, an 86-Mbyte DC 2000 drive mechanism.

The new version implements SCSI Disconnect/Reselect, a feature of the SCSI standard not previously supported on the Macintosh. Disconnect/Reselect, which is enabled through a Dantz Startup document (INIT) called Retro.SCSI, allows multiple SCSI operations to go on simultaneously, boosting performance 20 percent to 100 percent and smoothing background operations, the company said.

Apple has promised to incorporate Disconnect/Reselect into its SCSI Manager in System 7. "At first we were going to wait for Apple's implementation, but we decided not to, and we are very glad we didn't," said Richard Zulch, Retrospect's author and Dantz vice president of engineering. "Just about all the tape drives that Retrospect supports have dramatically improved in performance."

Apple's much-maligned Tape Backup 40SC benefits especially from the new INIT, according to Dantz President Larry Zulch. "It turns out to be one of the better devices for working smoothly in the background under MultiFinder," he said. Apple last year began bundling Retrospect with its drive.

The new Retrospect release also adds a Limit function, designed primarily for network administrators using the program to back up workstations to a server. The option lets the administrator set a limit on the size of the archive file; when the limit is reached, a fresh backup file is created.

In addition, Version 1.1 offers numerous interface improvements and fixes a few minor bugs, the company said.

The upgrade costs $25 but is free to users who bought Retrospect after Nov. 1, 1989.

Dantz Development Corp. is located at 1510 Walnut St., Berkeley, Calif. 94709; (415) 849-0293. □

For the Record

The Dec. 5 issue of MacWEEK incorrectly described Letraset's LetraFonts typefaces as copy-protected. Letraset removed copy-protection from its typefaces last March.

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AD 012017

Mac FileShare

From Page 1

party networking product that is compliant with the AppleTalk Filing Protocol will work with FileShare, he added.

The FileShare interface consists of "a subset of the current AppleShare administration program" that has been modified and incorporated into Finder 7.0, Espinosa said. Users will be responsible for setting network access to their hard disks by dragging iconic representations of other users onto a group icon.

System 7's first release will also include virtual memory, a new Finder, outline fonts, Interapplication Communications, the Database Access Manager and 32-bit addressing. Absent from the initial release will be the Layout Manager and the new print architecture, which will be incorporated into future releases.

Although some interface issues remain unresolved, developers and others familiar with the prototype System 7.0 said it is packed with new features tailored to streamline the Macintosh look and feel, particularly at the Desktop level:

▶ The new Finder includes a Help Manager, accessible through a Finder menu. Passing the mouse over an area of the screen brings up a text balloon displaying context-sensitive help.

▶ Installing desk accessories or applications into the Apple menu is as simple as placing them into a special "Apple Menu" folder.

▶ The Finder gives users several new options for displaying the path to the current folder or file, including a button in the title bar of a window that, when clicked, displays a pop-up menu showing the hierarchical path.

▶ A preferences dialog box allows users to set highlight color, window handling attributes, and font type and size for desktop operations.

▶ Dragging something from an inactive window no longer makes that window active.

▶ "Aliases" allow users to display files and folders in several locations without making multiple copies. Any reference to an alias automatically refers to the original file, even if the original file is moved or renamed.

Documentation for the new system is reported to be 4 inches thick. Apple plans to seed full beta copies of System 7.0 on compact disc, along with an updated CD-ROM version of "Inside Macintosh," to the developer community in April, sources said. □

Challenge to third parties

Apple's inclusion of file sharing software in its next system software release has analysts and vendors predicting a reshuffle in the low-end networking market.

"It definitely steps on some toes," said Jon Simonsen, director of marketing for San Diego-based Beagle Bros., which recently announced a file transfer program called Flash! The serverless file sharing market is dominated by TOPS Inc. of Alameda, Calif., but Information Presentation Technologies of Calabasas, Calif., entered the field with its Personal Server Network last year, and similar products are on the way from other vendors, according to sources familiar with the market.

"FileShare is not a TOPS killer," said Mike Rogers, director of product planning and technical services for TOPS. "We are focusing on heterogeneous networks requiring complete printing, file serving and messaging services." TOPS also will announce this week that InBox 3.0, the company's electronic-mail software, will be bundled with TOPS 3.0.

Ether+ Can Cut Your Wait Down to 1/3.

If it seems like it takes forever for your data to travel, your networking system could use some help. Instead of waiting around, you could be watching your info streak along at the speed of Ethernet with Ether+. In fact, your wait can be a third or less of what it used to be.

Ether+ has proven to be faster, more efficient and more reliable than competing products. But don't take our word for it — just look at what MacWEEK said about Ether+.

"There is little doubt that the Ether+ unit from Compatible Systems is the better buy. The construction is superior, the performance is better, the software is more sophisticated, and the documentation is more up to Macintosh standards."

MacWEEK Magazine
October 17, 1989

And Ether+ is priced at a low $495. So even though it costs less, you get superior performance, quick support, diagnostic software — everything you need to speed up your operation.

You can set up Ether+ in record time. It runs along both thick- and thin-wire Ethernet and lives in one little box that sits on or beside your SCSI-equipped Mac. Ether+ works with almost any network software — including AppleShare, TOPS, Novell, 3Com and Telnet. Diagnostic software helps you get Ether+ running and verifies a good connection. Once it's going you can just sit back and watch your documents zip and your records race.

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Sales

From Page 1

Carleen LeVasseur said last week.

Apple also said that earnings per share for the quarter will be below the $1.10 level posted a year ago. The market responded quickly to the Apple statement and Goldman, Sachs projections, with Apple stock dropping by $5.50 to $33.75 during the week ended Dec. 15. The stock, which traded as high as $45.25 in early December, has rebounded slightly, closing at $37.50 on Jan. 3.

Apple also announced last week that it will be repurchasing up to 2.5 million shares of its common stock.

In a report to investors last month, Benton, who could not be reached for comment, identified two factors adversely affecting Apple's momentum in the business market:

▶ Sales of low-end, older machines were below expectations, with unit sales of the Mac Plus for the fiscal first quarter estimated at 60,000, compared with 85,000 units for the same period last year. He also forecast a slide in unit sales of the Mac SE for the quarter to 80,000, down from 145,000 in the first fiscal quarter of 1989.

Storeboard Inc., a Dallas-based market research firm, also reported that while Mac revenues were up 9.5 percent for the first 10 months of 1989, dealers reported a 12.2 percent decline in unit sales of the Mac compared with 1988, from 270,400 units for the same period in 1988 to 237,500 in 1989.

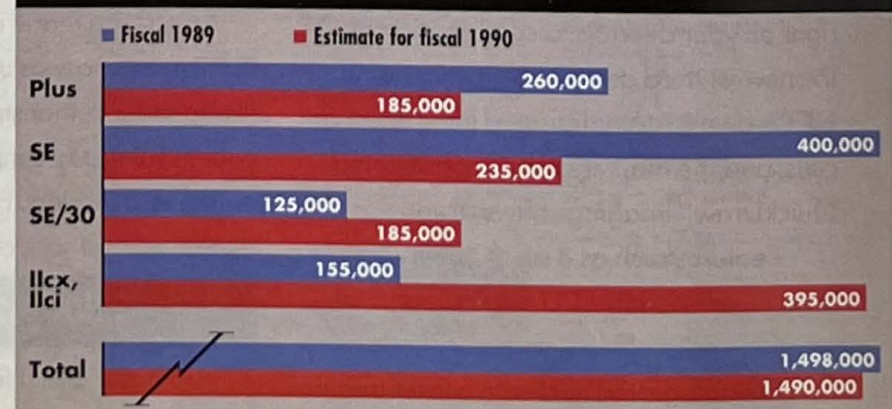
Benton wrote that while Apple plans to replace the Plus and SE — the only Macs in its product lineup that retail for less than $3,000 — with new, modular units in fiscal 1991, the company's hardware line will remain unchanged during the next 12 months.

▶ A more fundamental problem, according to Benton, is that the Macintosh may be losing its technological edge as other computer manufacturers, particularly Microsoft Corp. and IBM, develop graphical user interfaces that rival the Mac's ease of use. "While we anticipated that applications [for these interfaces] would arrive someday, we believed that Apple's still-superior ease of use and functionality would win out. Unfortunately, it appears that this is not the case and we now believe that Apple is losing momentum in the business market."

Benton predicted that only 90,000 Portables would ship in fiscal 1990 as opposed to an earlier estimate of 120,000. The drop caused Benton to predict an overall decline of unit shipments of all Mac and Apple systems for fiscal 1990 to 1.49 million, down from nearly 1.5 million in 1989.

Apple is expected to release its first-quarter results, as well as the results of its holiday "Cash Back or Free Trial Run" promotion, later this month, LeVasseur said. □

Forecast: Apple unit sales down in 1990



According to a December report issued to clients by Goldman, Sachs' Daniel Benton, unit shipments of Apple computers may decline slightly in fiscal 1990 as demand for older, low-end machines sags.

Informix

From Page 1

point of entry to SQL databases across heterogeneous networks. Already a major player in the host relational database market, the company has announced OS/2, Unix and Windows versions of Wingz.

Sources speculated that with the technology acquired from Informix, Claris may integrate its products with Wingz via Apple's announced Interapplication Communications architecture, which Apple will ship as part of System 7.0 this summer (see story, Page 1).

Foreshadowing this possibility, Yogen Dalal, vice president of product development at Claris, writes in this week's MacWEEK (see Page 18): "[IAC] opens the possibility of product groupings from different developers. ... Even though the dream of every [applications] vendor is to provide that 'full' suite of products, in reality users buy products from different vendors. They will now want these products to work together."

Officials at Informix and Claris declined comment, but sources said the deal cost Claris between $1 million and $3 million. □

Xerox

From Page 1

introduced, and this was the first we were hearing of [Xerox's] claims," said Apple spokeswoman Carleen LeVasseur.

Xerox said that recent changes in the legal climate had spurred it to file its suit now, although it declined to specify those changes.

Industry insiders also noted that the company has been increasingly aggressive in seeking revenues from the ground-breaking technology developed years ago at Xerox PARC (Palo Alto Research Center) since William Lowe assumed the company's helm in late 1988. Lowe was previously president of IBM's Entry System Division.

In May, Xerox offered to license technology developed for the Star. Only two companies, Metaphor Computer Systems Inc. and Sun Microsystems Inc., both of Mountain View, Calif., took advantage of the offer.

Last month's lawsuit said Apple's improper claims to such elements of the Star as windows, dialog boxes, menus and icons had inhibited Xerox's ability to license the Star technology.

While comparisons to the industry's other major look-and-feel lawsuit were inevitable, observers had varying interpretations of where the similarities lie.

Xerox itself has filed a motion to have its case linked to the Apple vs. Microsoft and Hewlett-Packard case. If that motion is approved, Judge William W. Schwarzer — the judge presiding over the earlier case — would also hear Xerox's suit. Xerox is being represented by the law firm that originally defended HP against Apple; hence, some experts noted that the legal arguments in both cases are remarkably similar.

"There are some wonderful ironies in the specifics of this suit," said Robert Mittman, a research fellow at the Institute for the Future in Menlo Park, Calif., citing the fact that "Apple got out front so strongly on protecting the Mac's look and feel when it didn't have its tail covered."

"Apple is going to have to eat its words [uttered against Microsoft and Hewlett-Packard]," said Russo, adding that Apple's declarations in the Microsoft and HP case "acknowledge that copyright can exist at a certain level. It can't wiggle out of that."

"Apple is making one argument out of one side of its mouth in the Microsoft case and another argument in this one," said G. Gervaise Davis, an attorney with Schroeder, Davis and Orliss in Monterey, Calif. "If Apple wins on the grounds it's not protectable, Microsoft carries that into court. If Apple loses on the ground it doesn't own the copyright, then clearly it has no claim in the Microsoft case. This is absolutely a no-win situation for Apple."

In contrast, Apple's LeVasseur said the company's position was identical in both cases.

"The Xerox claims confuse the difference between ideas and expression of ideas. Apple has always acknowledged that some of the ideas integrated into the Mac and Lisa came from various ideas available in the industry at that time. The ideas in and of themselves are not copyrightable.

"We made significant investments in research and development over several years and created our own unique expression," said LeVasseur. "It's what we've done with those ideas, our own unique expression, that is copyrighted and legally registered."

Apple's acknowledgement of its debt to Xerox comes at all levels of the company. "Much of the Macintosh's technology wasn't invented in the building," wrote CEO John Sculley in his 1987 autobiography, "Odyssey." "Indeed, the Macintosh, like the Lisa before it, was largely a conduit for technology developed at Xerox PARC."

Lawyers and industry experts said that a ruling in the case could have a broad impact on the computer industry.

"This kind of case is what's required," said David Liddle, chairman of Metaphor. "However this gets settled will set a pattern for the future and generate a new body of much-needed law for intellectual property." □

The Star: Pioneering graphical interface

The judge and jury who end up hearing the lawsuit Xerox filed last month will have to sort out many resemblances but also some important differences between the Mac and the Star, the trailblazing machine Xerox introduced in 1981.

Driven by a two-button mouse, the Star was the first computer to use icons, multiple windows, scroll bars and pull-down menus.

It offered an expandable 512 Kbytes of memory, and its 10-by-13-inch screen displayed at a bit-mapped 72-dpi resolution.

Initial releases implemented tiling rather than overlapping windows. Each window featured its own menu bar area in addition to a fixed system menu bar at the top of the screen.

A large keyboard offered a variety of keys dedicated to such functions as "delete," "move" and "help" as well as five "soft" function keys that changed depending on the task in process.

The Star interface relied heavily on the concept of "properties." Properties were attributes of any visible object. For example, properties of a document icon included its name, size and location; properties of text could be font, size and style. Users accessed a properties menu by selecting an object and hitting a "Properties" function key.

Early users said that the Star was characterized by a high level of integration. "Printing, networking and everything else fit together perfectly," said one user.

"The Star used a 100 percent-consistent interface across all capabilities," said another user. — *By Carolyn Said*

After Hours gives 4D users QuickHelp

Van Nuys, Calif. — After Hours Software last month released QuickHelp for 4th Dimension, a desk accessory help system for Version 2.0 of the ACIUS database. Targeted at both users and developers, the $99 program contains an entry for every command in the 4D language, with detailed descriptions, associated commands, manual references, parameter specifications, and room for personal notes.

Later this quarter After Hours will release a generic QuickHelp editor in desk accessory, 4D external and HyperCard XCMD (external command) formats, allowing developers to incorporate customized help into their 4D applications or other programs.

After Hours Software is at 5636 Van Nuys Blvd., Suite B, Van Nuys, Calif. 91401; (818) 780-2220. □

A Few of the Things You'll Save with Ether2.

Now it won't cost you an arm and a leg to make your data dash along at the speed of Ethernet. Ether2 can zoom your documents to their destinations for just $395. That's right, $395.

And don't think you have to sacrifice features for that price either. Ether2 has all the hot stuff its higher priced competitors do, without the higher price. For one low price, you get lightning speed, software to make the switch, and quick, complete support from knowledgeable professionals.

Ether2 runs along both thick- and thin-wire Ethernet. The card slips easily into your Mac II's compatible expansion slot. And after it's in, you won't have to think about it again. You can just sit back and watch your reports race. Your spreadsheets scream.

Ether2 software runs with AppleShare, TOPS, Novell, 3Com and Telnet, so whatever networking you have now will become fast friends with Ether2 in no time. We even give you special diagnostic software that tells you if your network connection is functioning correctly. Like all our products, Ether2 comes with a 30-day money-back guarantee and a one-year warranty.

And if you think our product is fast, try our service. We're ready with quick solutions to your particular needs right now. So call us today, and we'll give you a hand speeding up your network.

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Ragtime 3 will offer unique mix

New U.S. company to offer support

By Clay Andres

Ragtime is a uniquely integrated application that combines page-layout, word processing, spreadsheet and graphing functions. Although relatively unknown in the United States, it has been the best-selling Macintosh application in Europe for some time.

Ragtime's early versions suffered through two U.S. distributors that did not market or support the program well. Now, however, the owners of the company's West German distributor have established a new U.S. subsidiary, Ragtime USA, to market the program here.

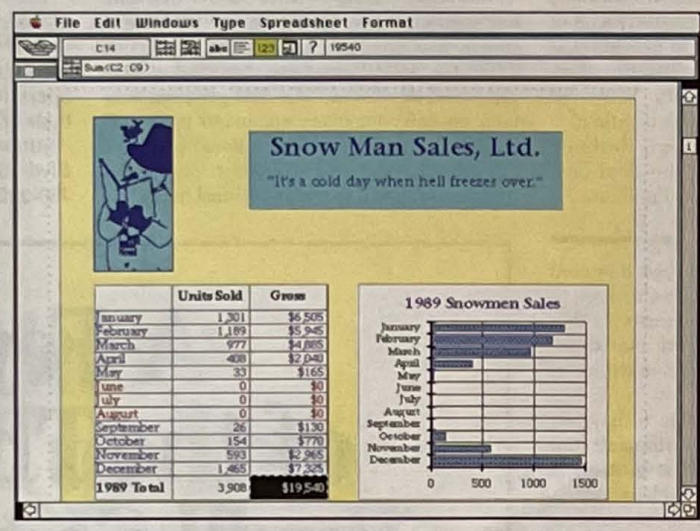
When Ragtime 3 is released in early February, it will have not only better support, but also a host of additional features and improved performance. The spreadsheet has been entirely rewritten, and the graphing module is completely new. Other major enhancements include 24-bit color support, direct scanning and multilingual word processing.

Syncopated structure. The frame is Ragtime's building block. It provides tighter integration than the separate application modules of programs like Microsoft Works. Frames allow all the functions to be used together to create a single multifaceted document without repeated cutting and pasting. There are four frame types: text, picture, spreadsheet and graph. They can be any size, and with a transparency option, they also can be overlaid.

Five programs in one. Each frame type has its own menu bar and associated mode-specific commands. The page itself is a virtual fifth frame upon which all manipulation of text, data and graphics takes place; a page-layout menu bar is the default when you open a document.

New commands and functions have been added to every module in Ragtime 3. The page-layout mode has gained text flow around frames, floating frames and frame rotation. The word processing mode can hyphenate in 14 languages and has optional dictionaries in eight languages. Text frames also support kerning, search and replace by fonts and styles, type style macros, and calculations within text.

Just as all spreadsheet functions are available within the word processor, the spreadsheet allows full word processing, including rulers and automatic word wrap. You can also rotate data and text within cells by 90-degree increments.



All of Ragtime 3's various modes are represented in the five rectangles of this company report. The four foreground functions float in frames on the page-layout mode in the background.

The spreadsheets are much bigger (253 columns by 16,000 rows) and faster than in previous Ragtime versions. Since you can have unlimited linked spreadsheets within a document and links to spreadsheets in other documents, spreadsheet size is essentially unlimited.

There is no macro language like Microsoft Excel's, but you can program script buttons to execute a series of functions. There are also user-definable number, date and time formats.

The new graphing module includes the three basic chart types: bar, line and pie. But since graphs are frames, and frames can be transparent, you can overlay charts to achieve special effects. There is also a 3-D pie-chart type, and all charts are dynamically linked to the spreadsheets.

The hallmark of Ragtime 3 seems to be maximum flexibility, and the chart mode is no exception. Every element is adjustable for color, font, style and scale.

The picture mode now has a Scan command, allowing direct scanning in of images from Apple, Abaton and some other standard scanners. Scanned images can then be adjusted or cropped within Ragtime.

Ragtime 3 can import text documents in MacWrite, Word 3, WriteNow and ASCII formats; picture documents in PICT, Encapsulated PostScript and TIFF formats; and spreadsheet data in SYLK or ASCII form.

The sum of the parts. For business presentations, word and number processing is a natural combination. Ragtime provides a powerful tool for people who want their numbers to look good. It is also particularly well-suited to designing forms, one of its major uses with large corporate clients in Europe.

One way to look at Ragtime 3 is as an easy-to-use page-layout program with four powerful applications built in. In this sense it is like a high-end version of Works. On the other hand, you can compare its separate pieces to Microsoft Word, Excel and Aldus PageMaker, the comparable best sellers in each of Ragtime's modal categories. The new program does not have all the features of those three powerhouses combined, but with its own unique capabilities and integration, it adds up to a new powerhouse.

Ragtime 3 will list for $599. Current owners can upgrade at release for $195, or get the pre-release version for $150 now, with the release shipped free later. Ragtime USA is located at 400 Walnut St., Suite 501, Redwood City, Calif. 94063; (415) 780-1800. □

AntiToxin zaps WDEF

Agoura Hills, Calif. — Mainstay last month upgraded AntiToxin, its virus detection and repair utility, to cope with the fast-spreading WDEF contagion.

The company is offering Version 1.3 to registered owners for $15. The $99.95 package includes a protection Startup document (INIT) as well as a diagnostic and repair application.

Unlike its leading rivals in the anti-virus field, AntiToxin did not need an upgrade for the new nVIR virus variant that surfaced in late November. Version 1.2, released earlier that month, included a generic "nVIR mutant detector" that proved capable of blocking and eliminating all variants of the persistent nVIR virus, the company said. (See MacWEEK, Nov. 21, 1989.)

Mainstay is located at 5311-B Derry Ave., Agoura Hills, Calif. 91301; (818) 991-6540. □

Signal Analytics brings scientists powerful image-processing toolkit

By Connie Guglielmo

Vienna, Va. — Signal Analytics Corp. is offering IPLab, a $499 image-processing program designed for scientific analysis.

One of the key features of the program is its ability to read data in byte, integer and floating-point formats, according to Robert Fontana, director of Signal Analytics. This means IPLab can read and display eight-bit color and gray-scale images not only in standard Mac file formats such as PICT2 and TIFF, but also in formats created by specialized cameras and scanners and other platforms, including IBM PCs and Digital Equipment Corp. VAX systems.

"To our knowledge, no other package for the Mac can read such arbitrary formats," Fontana said.

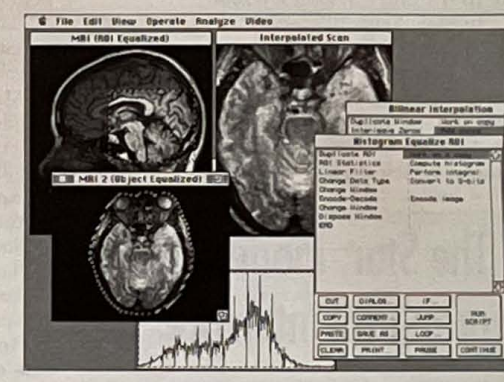
IPLab also supports a variety of point functions and binary operators, linear and morphological filtering, Fast Fourier and Cosine Transforms, and batch-mode processing. Users can write scripts, or collections of functions, that automate processing and analysis. The program ships with scripts for enhancing, compressing and restoring images. Scripts can access all of the program's functions and other scripts, as well as user-defined routines in C, Pascal and Fortran.

The company also offers $150 add-on modules that give IPLab direct access to video-capture boards from Data Translation Inc., Advent Computer Products Inc. and Image Systems Technology.

A biological researcher who asked not to be identified said IPLab is helping her measure calcium levels in neuron cells. "We have a video camera hooked to a microscope. The signal from the video camera is sent to the Mac, then analyzed with IPLab," she said.

IPLab requires a Mac II-line machine with 2 Mbytes of RAM, an eight-bit video card and a hard disk.

Signal Analytics Corp. is located at 374 Maple Ave. E., Suite 200, Vienna, Va. 22180; (703) 281-3277. □



Signal Analytics' IPLab offers a variety of sophisticated tools and functions for scientific analysis of images and data from scanners, cameras and other platforms, as well as from the Mac.

1stAid freezes Anti-Virus Kit

By Henry Norr

Boston — Citing its reluctance to become engaged in a spiral of response and counter-response that "may be perceived as an exciting new challenge to virus writers and thus further contribute to the escalation," 1stAid Software Inc. last month announced that it has discontinued development and maintenance of its Anti-Virus Kit.

Although the $79.95 package of virus-prevention and virus-detection utilities will remain available, the company said it will not provide further updates.

1stAid said the recent discovery of the WDEF virus prompted its decision. Anti-Virus Kit was one of the few anti-virus packages capable of detecting the new infection; in fact, the company said, its software was written with the goal of "generic detection" of virus mechanisms and successfully blocked all of the seven Mac viruses that have appeared since its introduction early last year.

But the WDEF virus, 1stAid President Susan Monjan wrote in a letter to registered owners last month, is "the harbinger of an escalation in the viral wars that we feel can only be detrimental to the Macintosh community" because the latest contagion includes not only the viral mechanism itself, but also a "stealth mechanism" for disabling anti-viral utilities.

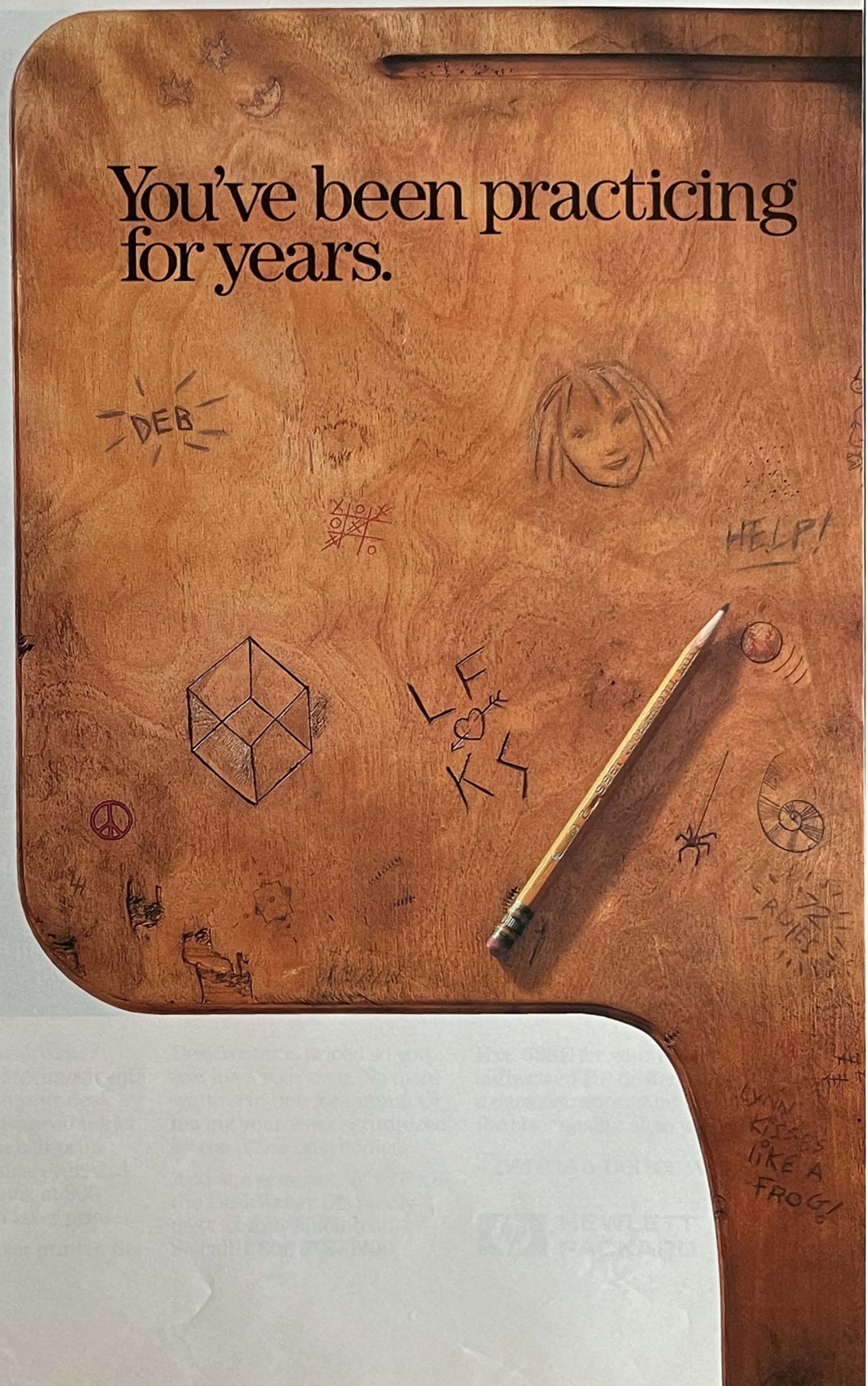
"The introduction of stealth mechanisms moves virus protection into an entirely new arena," the letter continued. "Attempting to detect mechanisms that are designed to thwart detection is a no-win situation. ... It is impossible to anticipate all possible stealth mechanisms."

1stAid will continue to sell and provide technical support for the product, which Monjan said is likely to remain effective against most, if not all, Macintosh viruses. But 1stAid will "make no guarantee, explicit or implied," as to the product's effectiveness after Dec. 15, 1989.

Customers who bought Anti-Virus Kit after Oct. 15 may return it for a refund.

1stAid Software Inc. is located at 42 Radnor Road, Boston, Mass. 02135; (617) 783-7118. □

You've been practicing for years.



Now it's time to play.

Graffiti in the Schools
by Kevin Shanahan
The sixteen buildings at Lawrence Hirsch Vo Tech High School feature a giant poem of abstract doodling. Spray-painted red, black, and yellow, the tangled mass of writing reaches a height of ten feet and runs the length of a city block.
Some students and staff call it street poetry. Others call it vandalism. Nearly all agree that the graffiti appearing on the nation's school buildings is a growing problem for teachers and administrators who fear student violence if they crack down. "If I mucked up the gym walls when I was a kid, they would have laid the paddle on me," said Gyorgi Superjalkoff, weightlifting coach at Fritch High. "Now with kids packing who knows what in their lunch boxes, I think twice about disciplining them."
Defenders of graffiti say it gives teenagers a rare opportunity to express themselves. "With strict regimentation of male and female roles and the stifling insistence on the material Ameri-can Dream, young individuals must achieve autonomy through what few creative outlets they have," said Tamara Birdsall, executive director of DEEP (Defenders of Extemporaneous Expression by Pupils).
Despite the current controversy, graffiti is nothing new. Early examples date from the appearance of the first written languages. "It's just what you would expect,"
LF
K's
Graffiti discovered in Plato's classroom.

Introducing the HP DeskWriter printer for the Macintosh. $1195.*

*Suggested U.S. list price. ©1989 Hewlett-Packard PE12921

RESUME: Linda Fitzsimmons
17 Old Mill Lane
New Lanark, CT 06878
(203) 555-1279
OBJECTIVE:
To work as an interior decorator
EXPERIENCE:
1988-present. Taught employee etiquette class. Adopted Southwest color scheme for executive offices. Co-authored "How to Tell if You're Descended from the Mayflower Pilgrims."
President, Creative Closet Designs, 1985-87. Developed ancillary storage systems for homeowners and small renters.
EDUCATION:
B.A. degree in Mass Communications, University of the Adirondacks, 1984.
Spent the fall semester of junior year at L'Ecole de Beaux Arts, Lucerne, Switzerland.
REFERENCES:
Available upon request.
Sales of Ice Cubes (in millions)
In the 1980s, sales of ice cubes nationwide increased as the fitness generation discovered numerous outdoor recreational opportunities. This sales increase is most notable in the West and Southwest regions where drought conditions prevailed.
1988 52.5
1987 45.9
1986 36.4
1985 30.1
FrostimanCorp.
Mr. and Mrs. John Fitzsimmons request the honour of your presence at the marriage of their daughter
Linda Helen
to
Mr. Kevin Shanahan
at four o'clock on the twenty-third day of November, nineteen hundred ninety, at the Church of Our Saviour, Maplesville.
Reception to follow.
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HEWLETT PACKARD

MicroPhone II gets front-end tools

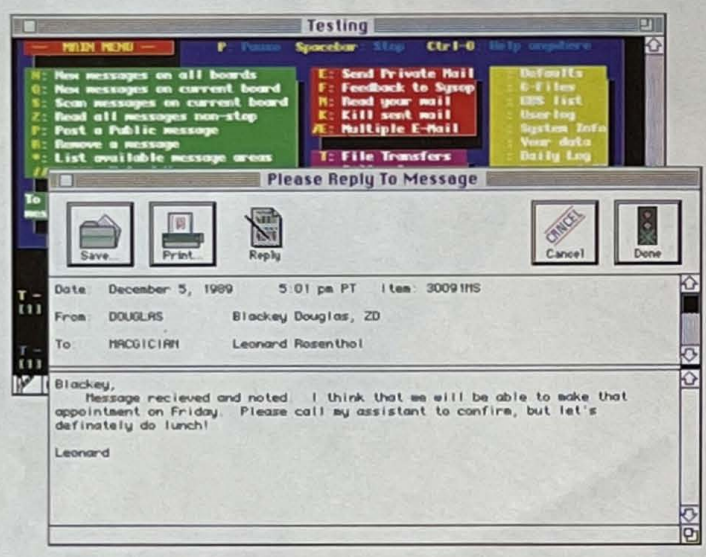
By Carolyn Said

Berkeley, Calif. — An array of tools to create front ends for electronic-mail and telecommunications services is featured in Version 3.0 of Software Ventures Corp.'s MicroPhone II, which shipped last month.

The $295 program comes with front ends for MCI Mail, GEnie, Delphi, CompuServe, Dow Jones, The WELL, EasyLink and BIX. But its key feature is that it "gives the average user the tools to customize their telecommunications world, moving away from the old-fashioned, text-based interfaces of many services," according to Leonard Rosenthol, a software engineer at Software Ventures.

Among those tools is an enhanced scripting system that can incorporate external functions (XFCNs) and external commands (XCMDs) written in HyperCard format. The new version also adds support for color, sound, array variables and file manipulation in scripts.

MicroPhone II is bundled with Dialoger, a HyperCard stack for creating custom dialog boxes from theResult Software of Greensboro, N.C. Once created in HyperCard, dialog boxes can be incorporated into MicroPhone scripts.


Testing
Please Reply To Message
Save
Print
Reply
Cancel
Done
Date: December 5, 1989 5:01 pm PT Item: 3009!MS
From: DOUGLAS Blackey Douglas, ZD
To: MACGICIAN Leonard Rosenthol
Blackey,
Message recieved and noted. I think that we will be able to make that appointment on Friday. Please call my assistant to confirm, but let's definately do lunch!
Leonard

MicroPhone II 3.0 users can write scripts to provide on-line or off-line text-editing capabilities for arcane host environments, such as the bulletin board shown in the background.

MicroPhone II also provides tools to run a small computer bulletin-board system with file transfer capabilities but without messaging, according to Rosenthol.

Other enhancements in MicroPhone II 3.0 include:

- Support for Zmodem, a fast, self-correcting, interruptible file transfer protocol.
- Multiple levels of password protection.
- Support for international character sets, allowing data transmission in European languages.
- A buffered keyboard window.
- Enhanced printing controls.

"I use [MicroPhone II 3.0] extensively and effortlessly," said beta-user Art Ackerman, a supervisor at Ford Aerospace of Palo Alto, Calif. "Doing mainframe session operations, I go into dozens of systems and configurations. I scripted up all those routines, so all I have to do is click a button for each one."

Canned scripts bundled with the program and a "watch me" feature that records a sequence of manual actions simplified writing the scripts, Ackerman said. "You don't even have to understand basic scripting to use it."

MicroPhone's ability to work at high speeds has "given me a tremendous savings on phone bills for long-distance dial-up lines," said beta-user David Sternlight, an economic consultant in Pasadena, Calif., who uses a 19,200-bps modem. In direct-connect mode, he has been able to transfer data at twice that speed, Sternlight said.

Upgrades are free to users who purchased MicroPhone II after Jan. 15, 1989. Those who purchased it before then can upgrade for $50. Owners of previous versions of MicroPhone can upgrade to Version 3.0 for $75.

Software Ventures Corp. is located at 2907 Claremont Ave., Berkeley, Calif. 94705; (415) 644-3232. □

Power Up delivers Address Book Plus

San Mateo, Calif. — Power Up Software Corp. last month began shipping Address Book Plus, a program designed for managing the names, addresses and phone numbers of personal and professional contacts.

The program lets users print address book pages, phone lists, index and rotary file cards, mailing labels, and envelopes in a variety of preset and custom sizes on LaserWriters or ImageWriters (see MacWEEK, Oct. 10, 1989). It offers a variety of import and export options, classification of entries in any of 10 user-defined categories, and pop-up "smart lists" and default field values to speed data entry.

The package also includes a desk accessory that lets users look up and dial contacts while using any application.

Address Book Plus is priced at $89.95, including 50 pages of special paper for printing address books, or at $129.95 with a leather binder.

Power Up Software Corp. is at 2929 Campus Drive, San Mateo, Calif. 94403; (415) 345-5900. □

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StackWEEK STEVE MICHEL

What's in the cards for '90: New versions, new platforms

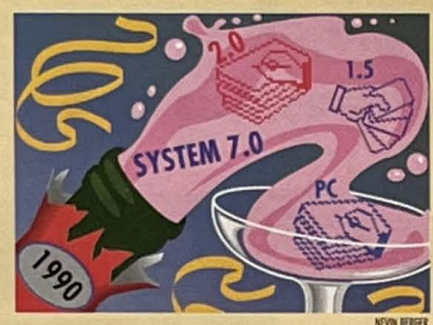
PRODUCTS

1990 looks to be a big year for HyperCard, multimedia and related areas. Two and a half years after the release of HyperCard, new products are appearing that will push the envelope, and some new players will be coming into the game. Let's take a look.

New versions. Probably first on the horizon will be the second release — to be called Version 1.5 — of SuperCard from San Diego-based Silicon Beach Software Inc. This new release will probably come in the first quarter. It will fix all known bugs (a fairly tall order), run faster and include some nifty new features.

Also due sometime in the first half of the year is a new release of Plus for the Macintosh, to be marketed by Spinnaker Software of Cambridge, Mass., which recently took over the rights to the German-developed program from Olduvai Corp. According to HyperCard pioneer Dan Shafer, the most exciting feature of this new version of Plus is the addition of "software slots," which will give developers the ability to create new kinds of objects in the program.

However, the biggest news for the first half of the year will probably be the release of HyperCard 2.0. Apple hasn't delivered a major upgrade to HyperCard in quite a long time, and a lot of users are waiting for the other shoe to drop. While some features of the new version are known — support for text ("sticky") buttons, variable-size cards, retention of its black-and-white environment, etc. — many developers are still wondering where Apple will take the program. A major



KEVIN BERGER

upgrade with vastly improved performance and elegant new features will up the ante for other multimedia developers. If the upgrade is at all disappointing, Apple will have, in effect, dropped the ball. As we shall see, others are waiting in the wings to pick it up.

Another significant development — perhaps the most significant for Mac users — will likely be the release of System 7.0 and whatever Interapplication Communications capabilities are included therein. The evolution of HyperTalk from a HyperCard programming language to a cross-application system programming language is a very exciting possibility. At the moment, the big question is, "When is this going to take place?" Will it happen with the initial release of System 7.0 or will it have to wait until later?

New products. Also due to make a lot of news this year is the likely appearance of more HyperCard-like programs for IBM PCs and compatibles. At least three such products are now in development: ToolBook from Asymetrix Corp. of Bellevue, Wash.; Descartes from Echelon Development Corp. of Burlington, Mass.; and the OS/2 version of Plus from Spinnaker. Details on each of these products are sketchy at the moment, but two of them promise some sort of compatibility with HyperCard stacks. I'm sure Apple's legal department will have something to say about that.

At the very least, these new products threaten to coax some HyperCard multimedia developers into the PC camp. The PC has, of course, a far larger installed base than the Mac, and with developments such as IBM's promised multimedia machine and the recently announced HeadStart machine (priced at less than $3,000 with a built-in CD-ROM drive and loads of bundled software) from Headstart Technologies of Great Neck, N.Y., the possibilities are growing. Windows for the PC is a flexible, powerful environment and due to become more so. A good HyperCard-like program has the potential of reaching a vast base of users on the PC. And that's good news for HyperCard developers, if not necessarily for Apple.

New manual. Apple has included a new manual with HyperCard 1.2.5, "The HyperTalk Beginners Guide." This manual is a gentle introduction to scripting and should help a lot of new users get into HyperTalk. Apple should have included this manual from the beginning.

If you have tips or other HyperCard-related information, write StackWEEK, c/o MacWEEK, 301 Howard St., 15th Floor, San Francisco, Calif. 94105. Electronic mail — MCI: STACKWEEK; AppleLink: D1507; Connect: MICHELS; CIS: 70611,1215.

TeleTypesetting updates MacRIP PS interpreter

By Pamela Pfiffner

Boston — TeleTypesetting Co. will this month release an updated version of its PostScript software interpreter.

Like Custom Applications Inc.'s Freedom of Press (see related story, next page), MacRIP lets users produce PostScript output on low-cost, non-PostScript printers. Unlike Freedom of Press, however, MacRIP is compatible with the Apple LaserWriter SC and GCC Technologies' Personal LaserPrinter and WriteMove printer.

Among the new features in Version 1.1 of MacRIP (known as PostPrint when introduced in July 1989) is support for Adobe Type 1 fonts when used with Adobe Type Manager. Like the latest version of Freedom of Press, the new TeleTypesetting package lets users working under MultiFinder select MacRIP via the Chooser and output files without closing their standard applications. It also allows a single Mac to function as a print server for an AppleTalk network.

In addition, the program provides a preview window and an interactive editor for inspecting and debugging PostScript files.

The $145 program comes with drivers for Apple and Hewlett-Packard printers and 17 PostScript fonts equivalent to Apple's LaserWriter fonts. Additional drivers, such as that for the Canon LBP series printers, cost $50. Drivers for Mitsubishi thermal color printers and Mirus film recorders will also be available next month.

Users who purchased MacRIP after Nov. 30 will receive Version 1.1 free of charge; for others, the upgrade fee is $25.

TeleTypesetting Co. is located at 474 Commonwealth Ave., Boston, Mass. 02215; (617) 734-9700. □

Shiva connects PCs to NetModem, NetSerial

By John Battelle

Cambridge, Mass. — Shiva Corp. last month shipped DOS Connect, a $99 program that gives MS-DOS computers access to Shiva's peripheral-sharing products for Mac networks.

When installed on an IBM PC or compatible equipped with a card supporting AppleTalk, DOS Connect allows users to access NetModem, Shiva's network modem, or NetSerial, which lets users share a serial device such as a printer.

The increased number of mixed networks using AppleTalk as a lingua franca spurred Shiva to create DOS Connect, said Dan Schwinn, Shiva president. "We want to offer equal service to all AppleTalk users whether they are running on a Mac or a PC," he said.

Shiva also announced a co-marketing agreement with Insight Development Corp. Insight publishes laser printer software, including LaserControl, a PC printer management package for Hewlett-Packard Co.'s LaserJet and DeskJet printers.

Shiva Corp. is located at 155 Second St., Cambridge, Mass. 02141; (617) 864-8500.

Insight Development Corp. is located at 2200 Powell St., Suite 500, Emeryville, Calif. 94608; (415) 652-4115. □

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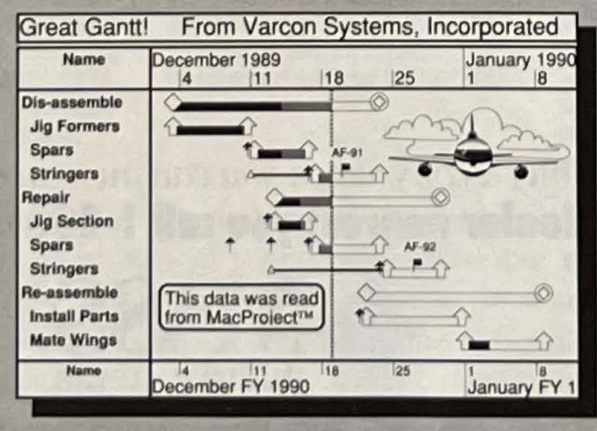

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Freedom of Press gets Chooser driver

By Pamela Pfiffner

Billerica, Mass. — Custom Applications Inc. last month released a new version of Freedom of Press, a software package that lets users print PostScript files on non-PostScript output devices.

Version 2.1a of the $495 PostScript-compatible interpreter includes a Chooser-selectable driver as well as the Freedom of Press application. By selecting the driver, users can now print directly from within any programs.

The driver writes a PostScript file to a folder on the user's machine or on a network print server. To do the actual printing, the Freedom of Press application must be active on the machine to which the files are spooled. The program can be set to print files from the spool folder automatically.

Freedom of Press is compatible with more than 50 printers, including the Hewlett-Packard DeskWriter, DeskJet, PaintJet and LaserJet II series; Tektronix ColorQuick and 4693D(X); and laser, dot-matrix, inkjet, color inkjet and thermal printers from such manufacturers as Canon, Epson, IBM, Kodak, Seiko, Sharp and Xerox. The program also works with Presentation Technologies and Laser Graphics film recorders.

Freedom of Press supports 24-bit color and PostScript color extensions, such as those found in PageMaker Color Extensions and QuarkXPress. It does not yet work with the Apple ImageWriters and LaserWriter IISC, however, or with GCC Technologies' Personal LaserPrinter or PLP II.

"Freedom of Press saves time and preserves image quality," said Maggie Honda, president of Honda Digital Graphics Inc. of Oviedo, Fla. She uses the application to output Adobe Illustrator 88 designs on a Montage Film Recorder from Presentation Technologies of Sunnyvale, Calif., without the circuitous format changes previously required.

Freedom of Press comes with 35 Bitstream typefaces, which can be scaled to any size or rotated to any angle. The next version, slated for release this spring, will support Adobe Type 1 encrypted fonts, the company said.

Preparing PostScript files for printing with Freedom of Press takes an average of one minute per page, the company said. Slides take three to five minutes each.

Freedom of Press requires a Mac II series or SE/30 computer with 2 Mbytes of RAM. Upgrades are $45.

Custom Applications Inc. is located at 900 Technology Park Drive, Building 8, Billerica, Mass. 01821; (508) 667-8585. □

40 MHz for price of 33

Flowery Branch, Ga. — DayStar Digital Inc. is offering 40-MHz versions of its Mac II Accelerators at the price previously charged for 33-MHz boards.

Through Jan. 19, the boards (which work with the Mac II, IIx and IIcx) will be available at $4,995 with a 40-MHz 68882 math coprocessor — $1,000 below the normal list price — or at $4,095 without the math chip, a savings of $900. According to DayStar, the 40-MHz boards deliver performance that is 85 percent faster than a stock IIci and three times the speed of a Mac II.

DayStar Digital Inc. is located at 5556 Atlanta Highway, Flowery Branch, Ga. 30542; (404) 967-2077. □

Ehman offers 20-MB drive at $299

Evanston, Wyo. — Pushing Mac hard disk prices to an all-time low, Ehman Inc. last month reduced its 20-Mbyte internal drives for the Mac II family to $299 and its external units of the same capacity to $349.

The drives use 3.5-inch Seagate mechanisms offering an average access time of 65 milliseconds. Both come with a 30-day money-back guarantee and a warranty that protects the drive mechanism for one year and covers other parts and labor for a second year. An optional $20 one-year service agreement guarantees users a replacement drive within 24 hours if the company is notified of a drive failure by 2 p.m.

Ehman Inc. is located at 97 S. Red Willow Road, Evanston, Wyo. 82930; (307) 789-3830. □

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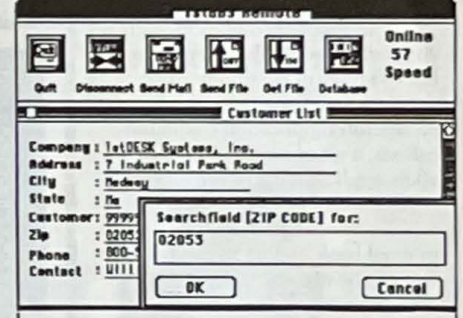

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Letters

Adobe and Apple make products, not war

In response to the many recent MacWEEK articles about Adobe Type Manager, I feel it is important to point out that ATM was not designed to turn an ImageWriter into a LaserWriter, nor was it designed to turn the Mac screen into a megapixel monitor. The beauty of ATM is that it generates bitmapped fonts in all sizes, taking full advantage of the output device's resolution. The only time a screen font on these devices can look as crisp as a font generated by ATM is when a properly hand-tuned bitmapped font is available to generate the specific size requested.

Also, there have been many references in MacWEEK to a "war" between Adobe and Apple. As the fourth-largest Macintosh developer, Adobe's Application Products Division is closely tied to the success of Apple, and we will continue to offer products that increase the appeal of the Apple Macintosh. Adobe and Apple will continue to be partners much more than competitors.

David B. Pratt, vice president and general manager
Application Products Division
Adobe Systems Inc.
Mountain View, Calif.

Don't smack your hard drive, Quantum warns

We certainly endorse your statement in MacInTouch (MacWEEK, Dec. 12) that "it's never a good idea to jar a Winchester hard disk." However, we strongly disagree with your suggestion that a user experiencing boot-up problems with a Quantum drive "knock" the drive to "jar it loose." Intentionally hitting any disk drive may produce a shock that could damage the drive and threaten data integrity. In addition, users should be cautioned that damage resulting from intentional abuse of the drive could void the warranty.

Users experiencing boot-up difficulties with a Quantum drive are strongly urged to contact their dealer or Apple service provider for details on a service program that is in effect to correct the situation.

Ray A. Miller, V-P, quality
Quantum Corp.
Milpitas, Calif.

Ric Ford replies:
We regret that editing changes to the column removed our caveat that the recovery procedure should only be used in an "emergency." The procedure is obviously not a solution to the hardware problem, and timely, authorized service is certainly preferable. We described it only because it has been successful at recovering data when drives failed and recovering the information immediately was crucial. We are also concerned about the issue of security of data on disks returned to dealers for repair. The unauthorized procedure may also allow people to perform an emergency reformat of a disk before turning it over to a dealer.

Send letters to MacWEEK, 301 Howard St., 15th Floor, San Francisco, Calif. 94105. MCI: 323-1203; fax: (415) 243-3650. We reserve the right to edit letters for clarity and length.

Mac Soapbox YOGEN DALAL

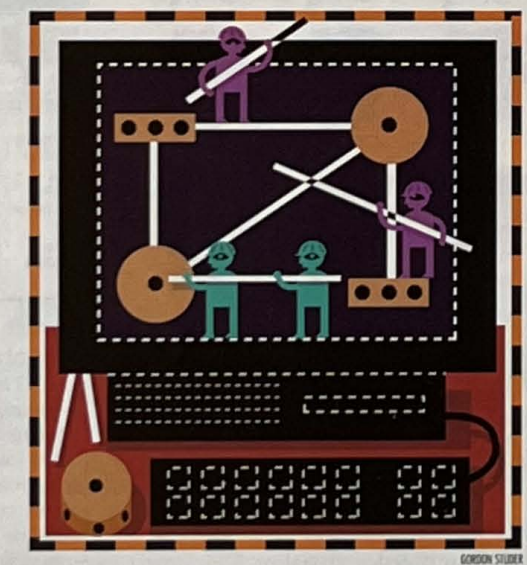
Developers hook into IAC future

As the Mac approaches its sixth anniversary, we embark on a new era — an era of possibility. With the arrival of Apple's System 7.0 comes Interapplication Communications, a set of mechanisms that allow applications to work together.

At its most basic level, IAC enables one company to create internal hooks within its products that can be used by other products, allowing a so-called suite of products to work together. At the Agenda 90 conference, for example, Claris Corp. linked prototypes of its Claris CAD and FileMaker II products. With both applications running under MultiFinder, users got the power of each application plus the synergy of their interaction.

But IAC goes beyond that. It opens the possibility of product groupings from different developers. This is easier said than done. Applications developers will no longer have the luxury of producing great but closed applications. They will have to change the way they develop products.

This will not happen overnight. User- and market-driven forces will make collaborators out of some "friendly" developers who will use Apple's standards and extend them to create this new class of applications. Users will benefit, and soon even competitors will realize that this capability is a powerful extension of the Clipboard-based IAC available today and that cooperation does not exclude competition.


GORDON STUBER

The "winners" will be companies that have the vision to foresee how this will affect their business. Even though the dream of every vendor is to provide that "full" suite of products, in reality users buy products from different vendors. They will now want these products to work together. Applications developers must overcome their inherent distrust of one another and cooperate in using well-specified protocols provided by Apple and others. By focusing on their particular service, developers can stay ahead of the competitors they cooperate with.

To elaborate further, as applications become building blocks that work together, it will be easier to substitute one building block for another. As a result, the inertia that makes corporate customers stick with products they know rather than taking advantage of newer, better applications will lessen. Developers will find that they must continue to innovate and that they can't defend their market share by creating products that try to be all things to all people.

Every change in the way users perceive the Mac creates new opportunities, and IAC is no exception. When applications from different vendors work together, users must have tools to orchestrate them. I envision tools that will allow users to hook applications together by themselves, much as they would stereo or video equipment.

System 7.0, cooperation between developers, and tools to orchestrate interaction between applications will let users create their own solutions to problems. This is the promise of end-user programming that we've all been waiting for. □

Yogen Dalal is vice president of product development at Claris Corp. and a member of the team that founded Claris in 1987. He also was founder of Metaphor Computer Systems and spent six years at Xerox Corp., where he worked on Ethernet and the Xerox Star.

Editorial

We need guidelines, not lawsuits

Oh, the supreme irony of Xerox's copyright lawsuit last month against Apple. Observers and players throughout the computer industry are saying that this latest case of litigation "serves Apple right."

Will it? Xerox has waited an extraordinary length of time to press its suit. The company watched for years as Apple made millions from its ease-of-use advantage and as the Cupertino company grabbed headlines last year with its look-and-feel lawsuit against Microsoft and Hewlett-Packard.

What's more, this latest legal salvo focuses on an extremely narrow technicality. Xerox does not seek damages against copyright infringement; after waiting most of the '80s, it seeks to overturn Apple's copyrights. So despite any personal gratification Xerox's action may give some people, this suit seems to us without merit. And while we are not legal experts, many who are doubt if this case will ever make it to court.

But the case does undercut further Apple's position against Microsoft and HP, which has been eroded with each progressive legal decision. The time seems ripe for Apple to enter a fair and equitable settlement with both defendants, especially since it has served whatever tactical business purpose Apple may have intended by delaying momentum for OS/2.

Beyond technicalities. But the importance of Xerox's latest legal salvo goes beyond who will win or lose based on legal technicalities. Rather, this case highlights several critical issues that must be addressed if the computer industry is to get through the 1990s with any semblance of order.

First, most people recognize that corporations do need to protect their intellectual property. And while protecting the overall idea of a graphical user interface is unreasonable and unfair, protecting its implementation seems justified.

Apple's Finder gave the company the edge to compete effectively against DOS, Unix and other syntax-driven operating systems. And a case can be made that Apple has made small but significant improvements to the original Xerox development to make the Finder uniquely Apple's.

Apple, Xerox and others must protect their intellectual property. But is Apple to be faulted for beginning these efforts years earlier than Xerox did?

Establishing a precedent. Unfortunately, the industry's recent litigious circus has established few legal precedents of any use to anyone. Instead, most lawsuits have been settled on small technicalities with limited applicability to other cases.

This is to be expected, since it often takes the legal system 10 to 15 years to understand the foundation of new technologies to establish fair laws governing their use. Obviously, the nation's judiciary does not yet comprehend today's computer technology well enough to lay down useful legal precedents. Equally obvious, the computer industry needs well-thought-out legal guidelines. To be most effective, those guidelines should be formulated by representatives of the computer industry.

It seems that the time has come for the various computer vendors, working in concert and in committee, to grapple with the issues they know to be critical in the next few years. And why not? The industry already has a variety of standards committees ironing out issues as troublesome as those involving law.

Such guidelines could then be presented as expert witness to the judiciary and lawmakers alike. Perhaps then, with intelligently formulated laws and guidelines, the legal system could catch up to the significant minutiae of computer law. And maybe, just maybe, we can go about our business with less fear, uncertainty and doubt. □

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MAC WEEK

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RING OUT THE OLD

1990

RING IN THE NEW

The times they are a changing. It is time to bid farewell to the first decade of Mac computing. The Berlin Wall between the Mac and PC has collapsed. The mirage of the appliance Macintosh is long gone. The jaggies are history.

With the '90s upon us, we offer a glimpse of the key issues confronting the Macintosh community in the coming year and decade. (See "Over the horizon," this page.)

But before marching forward into the brave new world, let's take a moment to remember the fortunes and follies of the Macintosh year just ended. Starting on the next page, we recall 1989 with a review of the quotes of the year, our picks for the best and worst products of 1989, guest columnist Guy Kawasaki's list of Christmas gift returns, and a look back at last year's predictions gone awry.

We also offer our own contribution to the look-and-feel controversy with MacWEEK's index and Mac the Knife's unconventional wisdom.

MICK WIGGINS

OVER THE HORIZON

As the new decade dawns, the Macintosh world faces a matrix of challenges. MacWEEK's editors examine the technical, economic and social issues that will shape the future for Apple, the Mac community and Macintosh managers.

Apple: Extending the Macintosh advantage

By Daniel Farber

While no one can predict with certainty Apple's fate or the economic forces that will prevail in 1999, for the present it's clear that the Macintosh product line has a lot of miles left on it.

In the past year, Macintosh retail sales volume outpaced the competition, and the company snagged some major purchase commitments from Fortune 500 customers. But the business climate may be less accommodating to Apple in 1990 than it was last year.

For starters, IBM and Microsoft Corp. may give Apple more trouble on its own turf than in the past. The duo has finally figured out how to diminish the impact of the Mac's unique positioning as the leading-edge personal computer by imitating Apple's emphasis on the graphical user interface and multimedia.

To confront the challenge, Apple must provide new products that address a broader spectrum of the market than the existing mix. The company is expected to entice new and existing customers this year with a predictable series of new desktop machines:

▶ A successor to the Mac IIx should ship in the spring. According to sources, the workstation will include a 33-MHz 68030 central processor, six NuBus slots and offer performance boosts via direct memory access and custom I/O chips. This machine will fill the need for a high-performance Mac that can handle complex applications such as color desktop publishing and CAD.

▶ A low-cost compact machine that replaces the Mac Plus and SE is expected to become available later in the year.

▶ Possibly the most important product due out within the year is a lower-cost modular color machine. According to sources, the new computer will have the same 16-MHz 68030 central processor as the Mac IIcx, on-board eight-bit color and a single slot.

Pricing will be a key issue for Apple in the coming year. Profit margins may get tighter, but market share could shrink if the company doesn't respond to demands from customers, dealers and third-party product vendors for more competitively priced machines.

If Apple were to price the Mac Plus/SE replacement machine at less than $1,000, it would eliminate much of the price sensitivity that has kept home and small-business users married to their low-cost DOS machines. And if Apple could offer a base price of less than $2,500 on the upcoming modular color Mac, it would stack up well on the price/performance curve against 80386SX machines from MS-DOS and OS/2 vendors.

In addition, Apple has to improve its ability to balance the supply and demand equation for its products. Too often, the company

See Apple, Page 34

Mac community: Facing a more complex world

By Henry Norr

By rights, the outlook for the larger Mac community — developers, dealers and end users — ought to be bright as the new year and the new decade begin.

After all, 1989, "the year of the CPU," saw the introduction of four impressive new machines. Looming on the horizon is another new model and a graphics accelerator board that together will bring the Mac unabashedly into the world of the workstation. And a new version of the Mac operating system — one that promises dramatic enhancements in capability and convenience, even while maintaining a high level of compatibility with older hardware and software — will be in the hands of developers, then users, within months.

But the forecast also shows some ominous clouds gathering over the Mac scene. Last month's Xerox lawsuit challenges the Mac's legitimacy and raises the prospect that the industry will be mired in look-and-feel litigation for years. Reports of new viruses, both on the Mac and on other platforms, have given further proof that personal

See Mac community, Page 32

Mac managers: Consolidating current gains

By Dan Ruby

Unlike their colleagues on the PC side, Macintosh managers do not face upheaval in the new decade. Instead, the '90s call for a controlled transition to an improved operating system, more-complete integration into corporate systems and an emphasis on consolidating the gains they have made.

To be sure, significant challenges lie ahead in applying new technology, coping with an apparently slowing economy and finessing the organizational issues inherent in supporting what is still a second standard in most companies.

But the hazards are manageable. Despite the increasing viability of graphical interfaces for IBM PCs and compatibles, the Macintosh remains demonstrably superior for many corporate applications. After having fought for much of the past five years for recognition, Mac managers can now get down to the real work of institutionalizing support for the Macintosh.

For those who have had to concentrate on waging political battles, 1990 will be a year of nuts and bolts. Mac managers will work to build systems and procedures for Macintosh training, user support and maintenance. With the growing recognition of the need for such tools, they will find resources available from Apple, third parties and professional organizations.

It also will be a year for implementing major enhancements in the Macintosh system, specifically System 7.0 and AppleTalk Phase 2. Neither advance calls for fundamental restructuring, but both require careful planning and controlled implementation. Some managers may be tempted to put off these tasks, but if they do they will deprive their organizations of the full Macintosh advantage. If Macs are to maintain their appeal to corporate end users, their advocates must make available significant new functionality, such as Inter-application Communications, virtu-

See Mac managers, Page 34

MAC THE KNIFE'S UNCONVENTIONAL WISDOM

(With apologies to Newsweek)

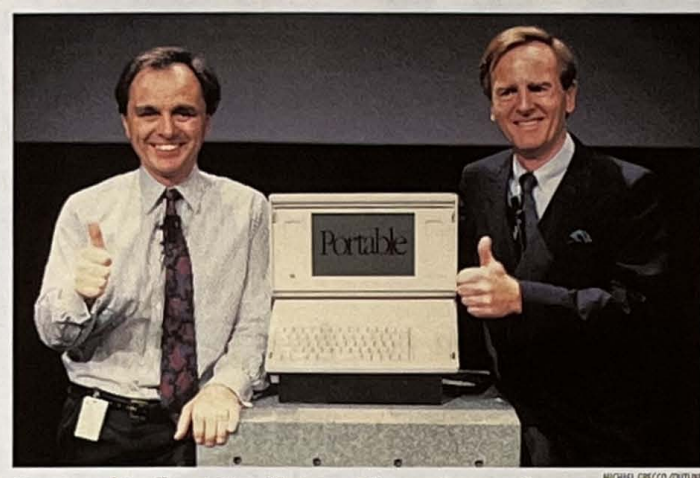
He's got a new attitude

The '90s will be very different from the '80s, the Knife reports. Just take a poll at your next neighborhood Communist Party meeting. The attitudes of the '90s will reflect these changes. Here are Mac the Knife's random and decidedly unscientific observations on how attitudes are changing.

PLAYERS		Unconventional wisdom
Ashton-Tate	↓	'80s: One of the Big Three. '90s: The American Motors of Mac software?
Appliance Macs	↓	'80s: Steve Jobs was a visionary. '90s: Toasters still have better warranties.
Adobe	↑	'80s: "Thou art my cash cow, hallowed be thy name." '90s: "Jaggies, what jaggies?"
PostScript clones	↑	'80s: It'll never work. '90s: Yo, John, wake up.
NeXT computer	↓	'80s: Wave of the future. '90s: FullWrite Professional of hardware.
Nolan Bushnell	↑	'80s: Semiretirement. '90s: "I want my MTV."
Apple marketing	↑	'80s: Multimedia will replace desktop publishing. '90s: Topgun jet shoots down HeloCar at Hawaii sales meeting.
Apple security	↓	'80s: Delightfully ineffective tactics. '90s: Ineffective strong arm tactics.
Apple three-month warranty	↓	'80s: Too short. '90s: Not long enough.
Earthquakes	↑	'80s: It's only rock 'n' roll. '90s: Shaken, not stirred.
Felix input device	↓	'80s: Innovative mouse replacement. '90s: Better as a cat.
High-profile third-party hard drives	↑	'80s: Filling Apple's gaping void. '90s: What a mess, but still a better deal.
MicroPhone II 3.0	↔	'80s: 1989's hottest telecommunications upgrade. '90s: Came within hours of being the first new upgrade of 1990.
User-type Mac mags	↔	'80s: Above reproach. '90s: Not above dummying fake MacWEEK headlines.
World-type Mac mags	↔	'80s: High-tech design. '90s: Years late in discovering in-house DTP.
Xerox	?	'80s: Marketing morons. '90s: "Anything Apple can do we can do better."

QUOTES OF THE YEAR

The CPU year of living dangerously



MICHAEL GRECCO/OUTLINE

Gassée and Sculley at Portable intro: "Plenty of screens." In December: "Constraints in supply."

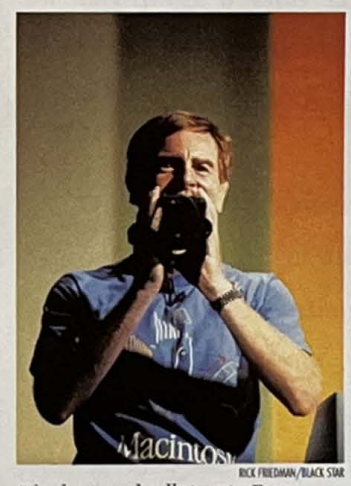
"I am not excited about a product I have only one of for demos — that will stop people from buying what I do have. I am not the Museum of Science and Industry."
Unidentified Midwestern dealer on the initial limited availability of the Mac Portable, Sept. 19

"This platform lets me finally buy a Macintosh."
Michael Pastore, corporate development officer for Ibid Corp. of Bellevue, Wash., on the power of the Mac IIci, Sept. 26

Apple plants a seed of 'core technologies'

"In terms of significance to the Mac, it is comparable to the announcement of the Mac II."
Yogen Dalal, vice president of product development for Claris Corp. of Santa Clara, Calif., on System 7.0 announcement, May 9

Floating a trial Helocar

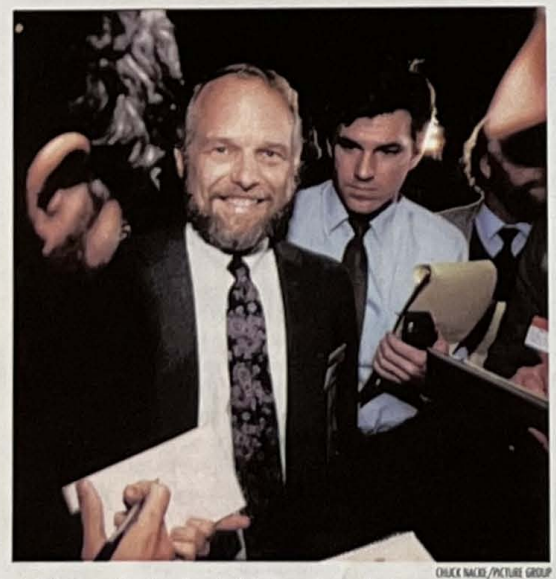


RICK FRIEDMAN/BLACK STAR

It's show-and-tell time in Boston, but multimedia reality remains elusive.

Multimedia is "an ill-defined and dangerous term."
Jean-Louis Gassée, Apple Products president, Aug. 22

What if they had a font war and nobody came?



CHUCK NACKE/PICTURE GROUP

Adobe cracked at Seybold showdown but stood solid with users.

"That's the biggest bunch of garbage and mumbo-jumbo I've ever heard in my life."
John Warnock, CEO of Adobe Systems Inc. of Mountain View, Calif, on the Apple-Microsoft font alliance, Sept. 26

How do you spell S-U-P-P-O-R-T

"We don't have enough arms and legs to provide support directly."
Morris Taradalsky, Apple vice president of customer service and information technology, June 20

No Mac is an island

"The announcements are the fulfillment of a checklist as delivered by corporate MIS two years ago."
Douglas Gold, analyst with IDC of Framingham, Mass., on Apple's June 12 blitz of networking and communications announcements, June 13

24 bits and what do you get?

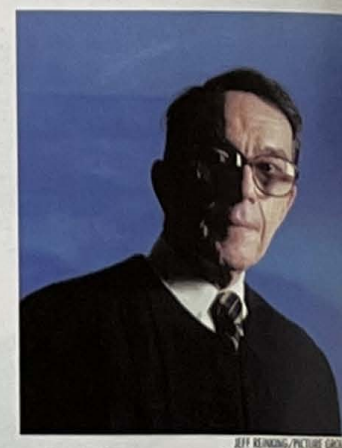
"We decolorize it. We're like Ted Turner in reverse."
Gary Cosimini, senior art director at The New York Times, on the Times' use of Mac-generated color graphics, Feb. 28

Notes from the underground

"The nuPrometheus League has no ambition beyond seeing the genius of a few Apple employees benefit the entire world."
The nuPrometheus League, in announcing its illegal distribution of the Apple source code, June 13

"A normal jury is not likely to think someone misdirecting an electron is a thief."
Rep. Robert Carr, D-Mich., on virus prosecution, March 14

No mitigation in litigation



JEFF REINKING/PICTURE GROUP

Judge Schwartzer took over for beleaguered Judge Aguilar in the Apple-Microsoft suit.

QUOTES OF THE YEAR

"Hey, Steve, just because you broke into Xerox's store before I did and took the TV doesn't mean I can't go in later and steal the stereo."
Bill Gates, chairman of Microsoft Corp. of Redmond, Wash., March 14

"I'm really scared that with companies claiming ownership of every idea, I won't be able to write good programs without a staff of lawyers."
Andy Hertzfeld, during a march on Lotus in Cambridge, Mass., against copyright protection, June 6

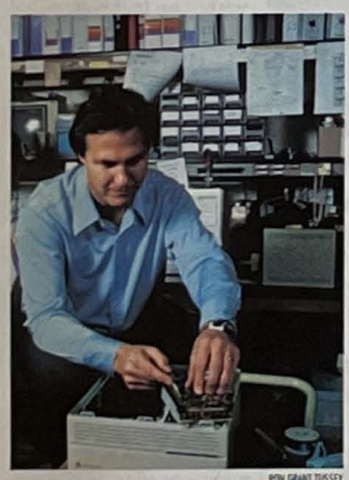
So many shows, so little time

"The industry will make the decisions on which ones succeed. It's the American way."
Mitch Hall, on the spring flurry of Mac shows, May 9

Blood and guts in the storefront trenches

"This industry has gotten to the point where the dealer who slices his wrist open the farthest is the one who gets the sale."
Rick Mathis, president, The Computer Shoppe, Nashville, Tenn., Feb. 21

Hardware from hell — Quantum drives, AppleFax and the ImageWriter LQ



RON GRANT TUSSEY

After stonewalling, Apple faced the music.

"If there were a problem, Apple would deal with it in the normal way, but so far nothing has come to our notice."
Stacey Byrnes, Apple spokeswoman, on failing Quantum hard drives, Sept. 19

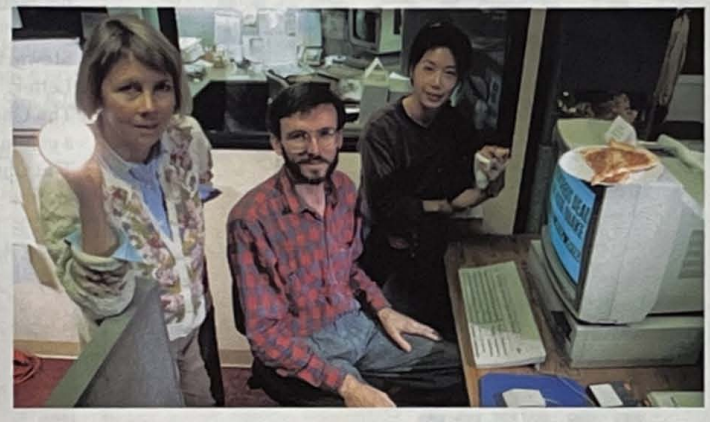
Enlisting in the military

MICHAEL GRECCO

On the bridge of the USS Missouri.

"The hurdle [for the Mac in government] used to be standards. Now it's cost."
Steve Broughall, president, Pentagon Mac Users Group, May 2

Whole lotta shakin' going on



The San Francisco Chronicle's Macs proved their mettle as an emergency production system.

JOHN HARDING

"Shards of glass the size of shoebox lids were propelled 4 inches deep into dry wall."
Marlene Somsak, Hewlett-Packard Co. spokeswoman, on damage to the company's Palo Alto, Calif., headquarters from the Oct. 17 earthquake, Oct. 24

Software standards and standard promises

Word 4.0 will ship "very, very soon and is guaranteed to be completely bug free."
Bill Gates, chairman of Microsoft Corp., Feb. 14

Putting Microsoft Excel 1.5 up against Wingz is "like comparing a Mickey Mouse watch to Rolex."
Peter Hyman, computer consultant and Wingz beta tester, Feb. 21

One reorganization too many?

"Del's departure represents a loss of history, but intelligent forms of life run deeper at Apple than at most other companies."
Stewart Alsop, industry analyst, Sept. 26

We knew about Gassée's Honda, but doesn't anyone at Apple buy American?

ROBERT M. LIGHTFOOT III

Loren wants a Maserati.

The Macintosh is "like a Mercedes Benz dashboard; it hasn't changed in 30 years, but there are a lot of changes behind the dashboard."
John Sculley, Apple CEO, Jan. 17

"I'd like a $2,000 Maserati, too, and while I might be able to get a car for that price, it won't be a Maserati."
Allan Loren, president of Apple USA, June 20

MacWEEK'S INDEX

(With apologies to Harper's)

Introductory price of the Macintosh, January 1984: $2,495
Of the Mac 512K, September 1984: $3,195
Of the Mac Plus, January 1986: $2,599
Of the Mac 512K Enhanced, April 1986: $1,999
Of the Mac SE, March 1987: $2,898
Of the Mac II, excluding monitor, March 1987: $3,898
Estimated number of certified Apple developers in 1985: 600
In 1989: 9,900
Number of desk accessories shipped with the Macintosh, January 1984: 7
In 1989: 10
Standard warranty on a Macintosh system, in days: 90
On an IBM PS/2 system: 365
On a NeXT workstation: 90
Average failure time reported on certain Apple Quantum 40- and 80-Mbyte internal drives, in days: 95
Largest AppleTalk network possible, theoretically, in nodes: 16.1 million
Estimated installed base of Macintosh computers worldwide: 2 million
Of Apple II computers: 4.5 million
Number of times Apple has sent a mailing to all registered Macintosh owners: 1
Foreign-language versions of Mac system software: 28
Of MS-DOS: 11
Price of the Macintosh Portable (13.75 pounds), with 1 Mbyte of RAM, 1.4-Mbyte SuperDrive and battery, per pound: $421.75
With optional 40-Mbyte hard disk (15.75 pounds): $412.64
Dimensions of the Macintosh Portable, in inches: 15.25 by 14.83
Of a standard airline tray table: 17 by 10
Number of major Apple reorganizations in 1989: 2
In 1988: 5
Value per share of the more than 3 million shares of Adobe stock sold by Apple in fiscal fourth quarter, July 1989: $79
Percentage increase in Apple net income for fiscal fourth quarter, 1989, over same period in 1988: 49
Percentage increase minus money earned from Adobe stock sale: 5
Suggested retail price of an Apple 40-Mbyte internal hard disk: $1,199
Difference in price between a Mac SE/30 with a 40-Mbyte internal hard disk and a Mac SE/30 without one: $500
Estimated percentage difference in price between the Mac Plus and Mac SE: 60
Estimated percentage difference in performance speed between the Mac Plus and Mac SE: 15
Estimated percentage difference in price between the Mac SE and SE/30: 52
Estimated percentage difference in performance speed between the Mac SE and SE/30: 375
Maximum number of colors that can be displayed simultaneously on a Macintosh screen using an eight-bit color board: 256
Using a 24-bit color board: 16,777,216
Estimated price per color of an Apple eight-bit color video board, in dollars: 2.53
Of a RasterOps ColorBoard 264 24-bit color video board: .00006
Estimated cost of the Cray X-MP/48 supercomputer purchased by Apple in February 1986, expressed in Mac IIci machines: 2,472
Estimated distance between Apple's Cupertino, Calif., campus and the epicenter of the 7.1 earthquake of Oct. 17, in miles: 20
Number of non-ACIUS ads in which former ACIUS President Guy Kawasaki appeared in 1989: 3

Sources: Apple; Apple Products Suggested Retail Prices, Nov. 15, 1989; Apple Computer Corporate Timeline, August 1989; Apple System Software Directions, May 1989; Apple's Guided Tour of the Mac 128K, from Developer Helper, Volume 1: Phil and Dave's Excellent CD; United and American Airlines; MacWEEK 1989.

Guy Kawasaki's Christmas 2.0

'Twas a difficult season for Santa this year
With all the test-drive Macs, he could barely steer
OK, so he blew it with some people's gifts,
But it was tough hauling Portables he couldn't lift
Rest assured he'll make good with Christmas 2.0 this week,
Just as sure as Apple's still upset about the IIci leak

John Sculley (Apple CEO)
The Christmas gift he wishes he had gotten: a new video
The Christmas gift you wish he had gotten: a VCR with a 90-day warranty that breaks on the 91st day

Jean-Louis Gassée (president, Apple Products)
The Christmas gift he wishes he had gotten: not applicable — "Christmas is for the bourgeois"
The Christmas gift you wish he had gotten: a Quantum hard disk

Allan Loren (president, Apple USA)
The Christmas gift he wishes he had gotten: Apple Europe's gross margins
The Christmas gift you wish he had gotten: Steve Jobs' speech writer

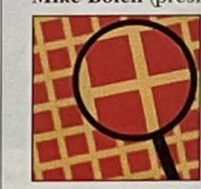
David Hancock (senior vice president of U.S. Marketing, Apple USA)

The Christmas gift he wishes he had gotten: a French accent
The Christmas gift you wish he had gotten: a HeloCar

Steve Jobs (president, NeXT Inc.)
The Christmas gift he wishes he had gotten: color
The Christmas gift you wish he had gotten: a floppy disk drive

Stewart Alsop (editor and publisher, P.C. Letter)
The Christmas gift he wishes he had gotten: a column in Forbes
The Christmas gift you wish he had gotten: a graphic artist to redesign his newsletter

Mike Boich (president, Radius Inc.)



The Christmas gift he wishes he had gotten: a recall of Apple monitors
The Christmas gift you wish he had gotten: a magnifying glass

John Warnock (CEO and chairman, Adobe Systems Inc.)
The Christmas gift he wishes he had gotten: Jean-Louis' green card
The Christmas gift you wish he had gotten: Adobe Illustrator 1.8.3

Bill Gates (chairman, Microsoft Corp.)

The Christmas gift he wishes he had gotten: biceps
The Christmas gift you wish he had gotten: a bottle of Windex

Bill Campbell (president, Claris Corp.)
The Christmas gift he wishes he had gotten: minority ownership by Apple
The Christmas gift you wish he had gotten: minority ownership by Apple

Mac the Knife (columnist, MacWEEK)
The Christmas gift he wishes he had gotten: a one-year subscription to Apple's dumpster
The Christmas gift you wish he had gotten: Jean-Louis' AppleLink password

Guy Kawasaki (unemployed author)

The Christmas gift he wishes he had gotten: one week on the New York Times best-seller list
The Christmas gift you wish he had gotten: humility

Users Won't Know The Difference.

$699
Jasmine 40 MB

But Buyers Will.

$499
Ehman 45 MB

According to a recent article in *MacWorld Magazine*, "there is very little to distinguish one hard drive from another, other than speed, software, and price." We agree.

In terms of speed, only a very few milliseconds separate the Jasmine and the Ehman hard disk drives. Both come with excellent back-up and hard drive utility software programs included free. Both come with two-year warranties and a 30-day money back guarantee. And since both companies have been around almost since the time Macintosh was first introduced, both enjoy a reputation for manufacturing high-quality products.

That brings us to price.

As you can see, the Ehman 45 MB hard drive is $200 less than the Jasmine 40 MB. That's a difference users may not notice, but buyers certainly will.

The reasons for such a difference trace to our low Rocky Mountain overhead and a business philosophy centered around customer value and service. And now, for the first time, we're offering a 24-hour replacement program in the unlikely event that your Ehman drive should require repair.

But don't take our word on it. *MacWorld Magazine* called the Ehman drive "a real bargain." Call us today and see the difference for yourself.

Overnight delivery via Federal Express. Visa, MasterCard, American Express welcome.

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SIZE (MB)	INTERNAL	EXTERNAL
20	$329	$399
30+	$379	$449
45	$449	$499
60+	$499*	$579
80+	$579*	$649
105	$799	$899
135	$899	$999
180	$1099	$1199

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*Good only on Macintosh II models. SE drives also available. Utility software not available on 20 MB. All product names mentioned are trademarks of their respective holders.

How did we do? 1989 Crystal Mac was a little cloudy

By Rochelle Garner

Each new year brings with it a time of resolutions, a review of past mistakes and, as surely as the swallows return to Capistrano, predictions of what the next year will hold. Embarrassment inevitably follows when the season calls for looking back at old clips, our own and those of some industry figures we suckered into this no-win exercise.

In the tradition of Jeane Dixon, MacWEEK proved less than omniscient. For example, Executive Editor Dan Farber predicted a floor-standing tower Mac. We also said Apple would introduce a 300-dpi inkjet printer, a 16-page-per-minute laser printer and a new Finder.

Others fared no better. Charlie Jackson, president of Silicon Beach Software Inc. of San Diego cautioned readers to "watch out for Sun Microsystems. It just might move in and steal the OS/2 thunder." Instead, Sun fell from financial grace.

Tim Bajarin, vice president of Creative Strategies of Santa Clara, Calif., suggested that in 1989 "a Mac III with a digital signal processor, as in the NeXT machine" would appear. And Richard Shaffer, editor and publisher of the Technologic Computer Letter of New York, said he expected "to see System 7.0 out in summer." On the other hand, Steve Edelman, chief scientist of SuperMac Technology of Sunnyvale, Calif., described 1989 "as the year OS/2 will live or die." While OS/2 isn't dead, it isn't exactly thriving.

Other industry observers didn't do badly, either. "The economy is going to be flat, so overall computer sales will be even flatter," said Ash Jain, publisher of Macintosh Market Report of Irvine, Calif.

MacWEEK scored a few hits, though mainly in the category of safe predictions, as when Farber predicted that Apple would finally introduce the Mac Portable. We also said that "cost-saving full-page color separations from the desktop will become possible in 1989." Although breakthrough products like Adobe's Photoshop and Letraset's ColorStudio did not hit dealers' shelves last year, they did reach the hands of beta testers in the professional publishing market.

In the area of connectivity, MacWEEK gazed deeply into the crystal ball to state that CL/1 and TokenTalk would "materialize in 1989." We also expected to see AFP-compliant file servers and new electronic-mail products boasting "gateways to numerous systems." All these things came to pass, although CL/1 got in just under the wire.

Never ones to shy away from humiliation, MacWEEK's intrepid forecasters try their luck in the "Over the horizon" feature in this issue. This year's guest psychics hazard their guesses for the new year, this page. □

Pundits corner: 1990

By next Christmas you'll be able to buy color Mac technology for a lot less than you can today. People will discover Guy Kawasaki is really Elvis Presley.

— Mike Slade, group product manager, Microsoft Corp.

The '90s will be a decade when the relationship between people and machines becomes magical. By the end of the decade, people will walk around with a computer in their pocket as powerful as most of today's desktop machines.

— Marc Porat, business development, Advanced Technology Group, Apple

System 7 will change the rules of the software industry. How products work together will become most important. It also will redefine how people use their personal computers because it opens up unanticipated kinds of capabilities, where maybe one plus one can equal three.

— John Zeisler, vice president of marketing, Claris Corp.

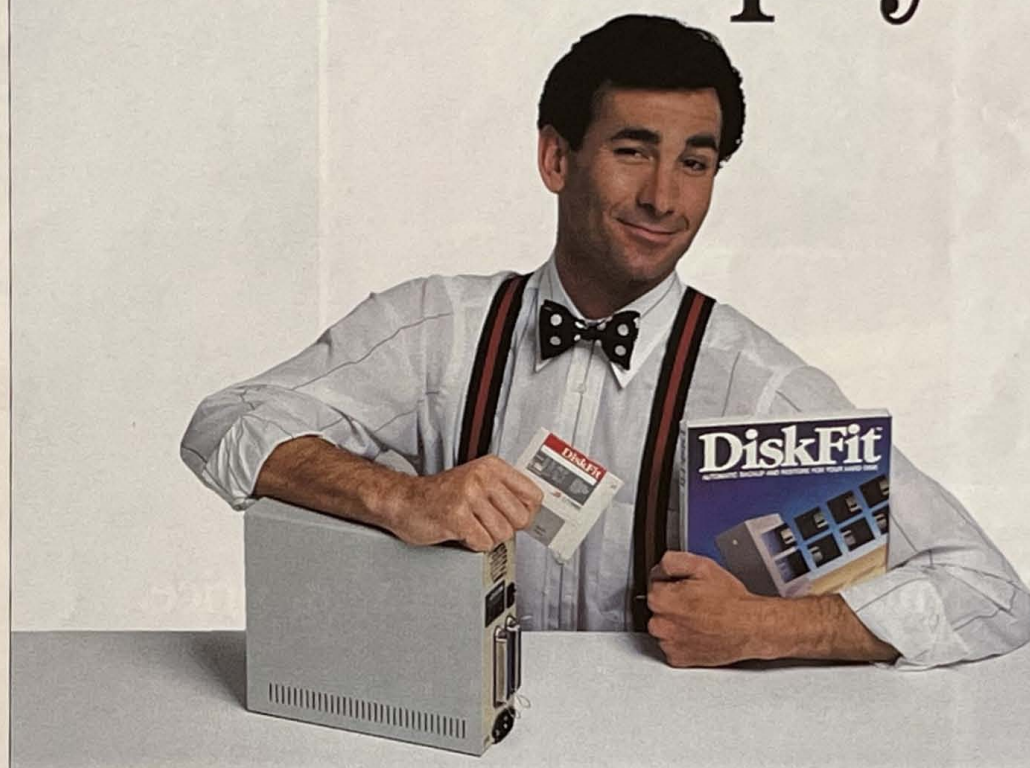
In a sense, the Mac market is heading toward development for "every man"; the enabling technology will be object-oriented. The '90s will see the elimination of application-specific hardware. We expect every developer to have cross-platform application portability as a requirement.

— Adele Goldberg, president and CEO, ParcPlace Systems

Like the walls between East and West, the walls between personal and corporate computing are tumbling down. People will make productive use of data found elsewhere in the corporate enterprise by manipulating it with applications they already know. The democratization of the computer in the '80s will become part of the computer mainstream in the '90s.

— Doug Edwards, executive director of marketing, Informix Corp.

Larry's DiskFit Breaks Murphy's Law.



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The best and worst of 1989 products

By Becky Waring

In MacWEEK's second annual guide to the best products of the year, we fiddled with the categories. Since it doesn't make sense for desk accessories and utilities to compete with full-featured applications, we have separate lists for products priced more than $200 and those costing less than $200. We also include a list of the best upgrades of the year. And we've added a category for the things we wish we hadn't seen.

We must have had donuts on the brain, since we've replaced the traditional 10 best with groups of dozens and half-dozens.

The choices, presented in alphabetical order, are the result of many hours of haggling among the MacWEEK staff. In a few instances where we felt it was important to include a class of products but couldn't settle on a single standout, we wimped out and listed several as one entry. All products were reviewed in MacWEEK during 1989.

Twelve best new products over $200

atOnce!, Layered Inc.
Layered accomplished the improbable: It created a general-purpose small-business accounting program that is powerful and affordable.

Claris CAD, Claris Corp.
Claris put the Macintosh into the mechanical CAD market, and Claris CAD is now the standard by which other 2-D drafting programs are measured.

HP DeskWriter/HP PaintJet, Hewlett-Packard Co.
Once it decided to get into the Mac printer market (finally!), HP did it right. The DeskWriter offers compatibility and quality 300-dpi output at a reasonable price, while the PaintJet puts color on the desktop without breaking the bank.

Mac IIcx/IIci, Apple
Apple listened to its customers and gave them the power and expandability of the Mac II family and the compact footprint of the original Mac.

Mac Portable, Apple
Need we say more? Apple waited until every component was perfect (well, almost) and came out with the Cadillac of portables: smooth, fast, heavy and expensive.

Mac Portrait Display Monitor, Apple
Noting the popularity of the Radius Full-Page Display, Apple came out with its own version, which is unmatched in crispness and contrast.

NuVista, Truevision Inc.
With mind-boggling special-effects capabilities, this pioneering 32-bit color video capture board has become a prerequisite for high-end multimedia work.

QMS ColorScript 100 Model 10, QMS Inc.
QMS upped the ante in the color PostScript printer market by reducing the price and increasing the speed while maintaining quality.

SmartForm, Claris Corp.; TrueForm 2.0, Adobe Systems Inc.
SmartForm came first and swept the field, but Adobe's purchase and upgrade of TrueForm matches it. We expect this battle of two Mac market superpowers to yield even better things in the future.

Studio/8, Electronic Arts
Studio/8 stands apart from the crowd of eight-bit color painting programs with its ease of use and fancy features.

TeleBridge, Shiva Corp.
Merging the best features of its NetModem and NetBridge products into one, Shiva continues to dominate the communications hardware market.

Wingz, Informix Software
Finally, a spreadsheet that bests Excel. With its 24-bit color capability and integrated graphics, Wingz was worth the wait.

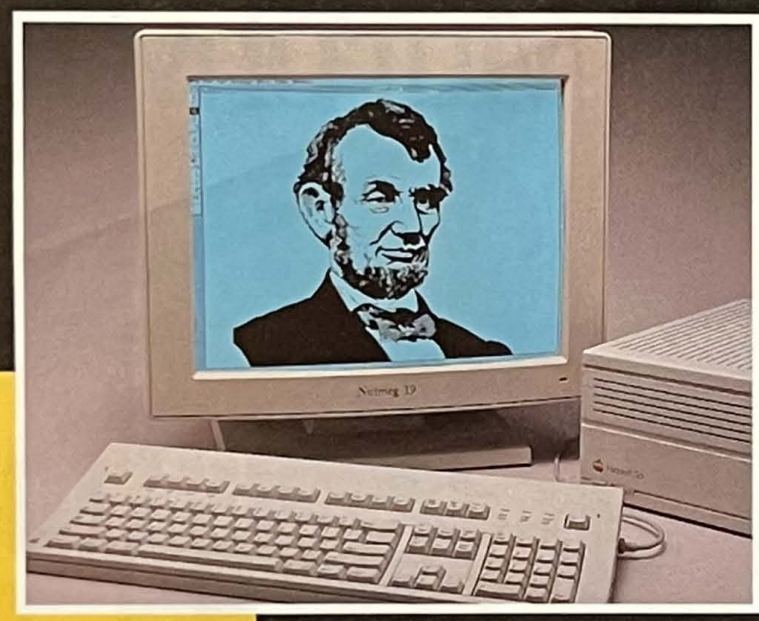
Six best new products under $200

Adobe Type Manager, Adobe Systems Inc.
With System 7.0's outline font technology still almost a year away, Adobe filled the gap. ATM really works and will change the way people choose printers.

DocuComp, Advanced Software Inc.
Comparing two documents and listing the differences sounds easy but it's not, what with cutting, pasting and multiple changes. DocuComp does it and does it well. It offers almost everything a lawyer or writer could want.

See Best products, Page 30

Affordable Perfection



The Nutmeg 19-perfection at a fair price.

The Nutmeg 19 monochrome monitor and its graphics interface are a unique pair of products which allow Macintosh users to gain from the experience of two key graphics systems suppliers. Our monitors are made by the foremost supplier of monitors to the world's best known electronics and computer manufacturers; Nutmeg is the premier supplier of a full line of board level video products for all Macintosh computers. Together, they offer the ultimate in crisp, clear monochrome video systems for the Macintosh -- at a price which will please you.

The Nutmeg 19 has 1024 x 768 pixels, 78Hz refresh rate, 72dpi. All Nutmeg video products for the SE/30 and Macintosh II family come with a custom copy of Berkeley Systems' Stepping Out II virtual screen software.

Nutmeg Graphics Boards

	Plus	SE	SE/30	II	IIx	IIcx	IIci
Nutmeg 15" FPD	✔	✔	✔	✔	✔	✔	✔
Nutmeg 19" DPD	✔	✔	✔	✔	✔	✔	✔
Apple Portrait Display		✔	✔				
Apple Two-Page Monitor		✔	✔				
Apple 13" Color Monitor			✔	✔	✔	✔	✔
Trinitron® 19" Color Monitor			✔	✔	✔	✔	✔
Datashow®, QA50 pads			✔	✔	✔	✔	✔

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1 Your company's primary business activity AT THIS location (check one only):

Non-Computer Related
- ☐ 01. Aerospace
- ☐ 02. Architecture, Engineering
- ☐ 03. Research and Development
- ☐ 04. Graphic Arts
- ☐ 05. Communications: Publishing, Advertising, Public Relations, Promotion
- ☐ 06. Government: Federal
- ☐ 07. Government: Non-Federal
- ☐ 08. Manufacturing
- ☐ 09. Education
- ☐ 10. Finance: Banking, Accounting, Insurance, Real Estate
- ☐ 11. Health, Medical, Legal
- ☐ 12. Retail, Wholesale, Distribution
- ☐ 13. Agriculture, Mining, Construction, Oil, Transportation, Utilities

Computer Related
- ☐ 20. VAR/VAD
- ☐ 21. Retailer/Distributor
- ☐ 22. Systems House/Data Processing Service
- ☐ 23. Manufacturer (Computers, Software, Peripherals)
- ☐ 24. Computer Consultant
- ☐ 99. Other Businesses & Services (please specify) _____

2 Your Professional Title (check one only):
- ☐ A. Chairman/President/Owner/Partner
- ☐ B. VP/Controller/Treasurer
- ☐ C. General Manager/Director
- ☐ D. Micro Manager/Specialist/Coordinator
- ☐ E. Project Manager
- ☐ F. Art Director/Graphic Designer/Artist/Illustrator
- ☐ G. Manager/Supervisor (not listed above)
- ☐ H. Architect/Engineer
- ☐ I. Systems Analyst/Programmer
- ☐ J. Consultant/Advisor
- ☐ K. Scientist
- ☐ L. Educator
- ☐ M. Editor/Writer
- ☐ N. Professional (Doctor, Lawyer, etc.)
- ☐ O. Accountant
- ☐ P. Representative
- ☐ Z. Other (please specify) _____

3 Your department/function at this location (check one only):
- ☐ A. Engineering/Systems Engineering
- ☐ B. Research & Development
- ☐ C. Communications/Publishing/Public Relations
- ☐ D. Art/Creative Design
- ☐ E. MIS/DP/Information Systems
- ☐ F. Manufacturing/Operations/Production
- ☐ G. Sales/Marketing
- ☐ H. Administration/Management/Personnel
- ☐ I. Accounting/Finance
- ☐ J. Education/Training
- ☐ K. Science
- ☐ L. Consulting
- ☐ Z. Other (please specify) _____

4 Are there Macintoshes or other PCs listed below owned and/or planned for purchase within 1 year at this location?
☐ Yes ☐ No
(Write in accurate quantity for all that apply)

		Currently Owned (Quantity)	Plan to Purchase (0-12 Months) (Quantity)
Macintosh IIcx/Macintosh IIx	1		
Macintosh IIci	2		
Macintosh II	3		
Macintosh SE/30	4		
Macintosh SE	5		
Macintosh Portable	6		
Macintosh Plus	7		
Macintosh (Other)	8		
IBM/Compatible Micro	9		
Workstation (e.g. Apollo, Sun)	10		

5 If your firm's primary business at this location is retailing, reselling or consulting, how many Macintoshes are sold per year (answer one only):
- ☐ A. Retailer: sold per year _____ (specify quantity)
- ☐ B. Reseller: resold per year _____ (specify quantity)
- ☐ C. Consultant: purchased by your clients through your firm's recommendations per year _____ (specify quantity)
- ☐ D. Not Applicable

Required: Company name and company street address must be written below or applications cannot be processed. *Please print.*

First Name | Last Name
Title | Business Telephone
Company Name
Division | MS
Street Address (Where you work) P.O. boxes not accepted on this line.
City | State | Zip

Optional: Enter home address below ONLY IF YOUR COMPANY WILL NOT ACCEPT DELIVERY. (Company information is still required.)

Post Office Box or Street Address
City | State | Zip

6 Please check the Mainframe(s) or Minicomputer(s) at your location (check all that apply):
☐ 01. VAX ☐ 02. IBM ☐ 03. Other ☐ 09. None

7 Do you purchase, recommend, specify or approve any of the Macintosh/Compatible products listed below?
☐ Yes (If yes, please check all that apply) ☐ No

Computers
- ☐ 01. Macintoshes
- ☐ 02. Workstations
- ☐ 03. Minis, Mainframes

Connectivity
- ☐ 10. Local Area Networks
- ☐ 11. Modems
- ☐ 12. Micro/Mini/Mainframe Links
- ☐ 13. Communications Software

Peripheral Equipment
- ☐ 20. Laser Printers
- ☐ 21. Color Printers
- ☐ 22. Color Monitors
- ☐ 23. Hard Disks
- ☐ 24. Backup Systems
- ☐ 25. Plotter, Charting Devices
- ☐ 26. Scanners

Add-in Boards
- ☐ 40. Memory Boards
- ☐ 41. Graphic Boards
- ☐ 42. MS DOS Boards
- ☐ 43. Ethernet Boards

Software
- ☐ 50. CAD/CAM
- ☐ 51. Graphics
- ☐ 52. Desktop Publishing
- ☐ 53. Desktop Presentation
- ☐ 54. Database
- ☐ 55. Programming
- ☐ 56. Accounting, Payroll
- ☐ 57. Spreadsheets
- ☐ 58. Music
- ☐ 59. Project Management
- ☐ 60. Word Processing
- ☐ 61. Utilities

8 If you help purchase, specify, recommend or approve Macintosh Computers, software or peripherals, for how many MACs do you have this involvement over the course of one year?
- ☐ 01. 500 +
- ☐ 02. 100-499
- ☐ 03. 50-99
- ☐ 04. 20-49
- ☐ 05. 10-19
- ☐ 06. 4-9
- ☐ 07. 1-3
- ☐ 09. None

9 Please indicate the communications capabilities that the Macintoshes at your location have (check all that apply):
- ☐ 01. Local Area Network
- ☐ 02. Communicate with corporate workstations, mini or mainframe computers
- ☐ 03. Communicate with remote mini or mainframe computers
- ☐ 04. Communicate via modem
- ☐ 05. Voice/Data
- ☐ 09. Other (please specify) _____

10 Indicate how many employees there are in your entire company (check one only):
☐ 01. 1000 or more ☐ 02. 100-999 ☐ 03. Under 100

11 Indicate an additional individual at this location who might qualify for a FREE subscription to MacWEEK:

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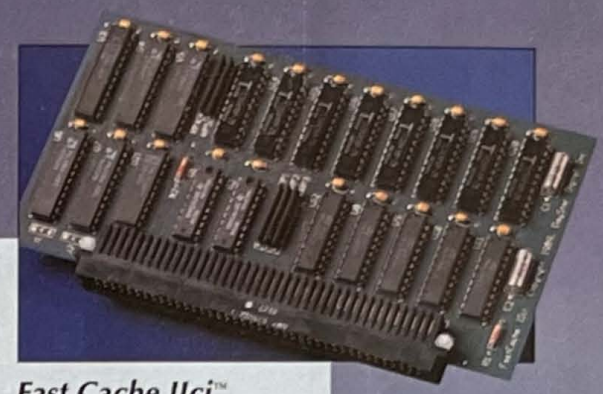

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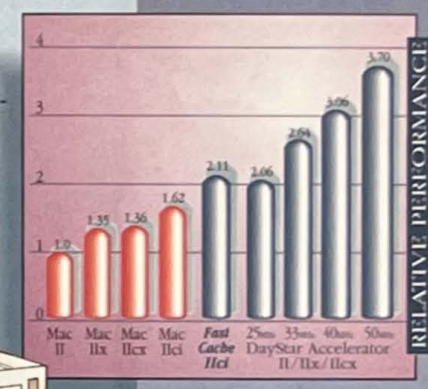

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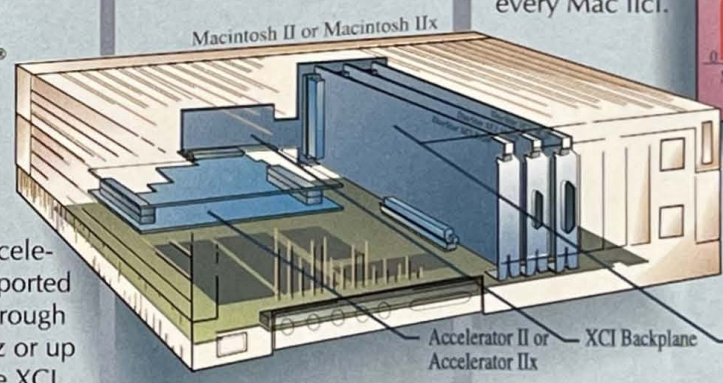

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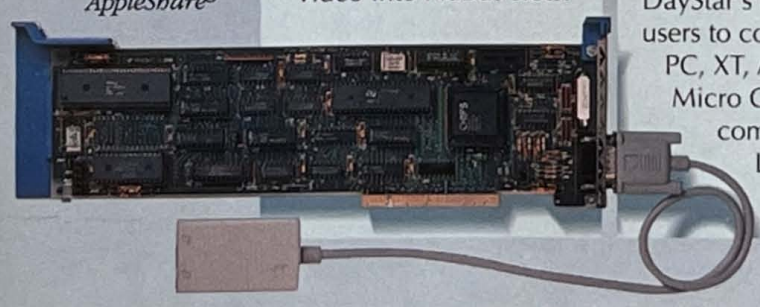

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Usually, the technology available to computer users just plods along—with competing products repeating one another's so-called improvements.

But once in a blue moon there's a great leap of innovation. Something new appears that's so well thought out, so smart, that the way you work may never be the same again.

WIZ™ by CalComp, for example.

WIZ is an exciting new productivity tool. Combining the easy-to-use features of a mouse with the power of an "intelligent" graphics pad to enhance every pointing, tracing and drawing function you do.

WIZ meets the needs of virtually every Macintosh and PC user—from novice to advanced. Because WIZ gives you the convenience and flexibility of six programmable buttons, a cross-hair pointer and 1000 dpi for pinpoint accuracy, along with

Prehistoric.

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a user-definable mouse area.

What's more, WIZ unleashes the full power and speed of your software. Optional templates for most major programs eliminate tedious pull-down or bar menus. Because WIZ templates put the commands you use most at your fingertips for instant access. And for the artist in you, WIZ offers an optional pen for drawing.

There's no rolling ball or moving parts. Nothing to clean. And WIZ has a five year warranty backed by CalComp, a world leader in computer graphics for over 30 years.

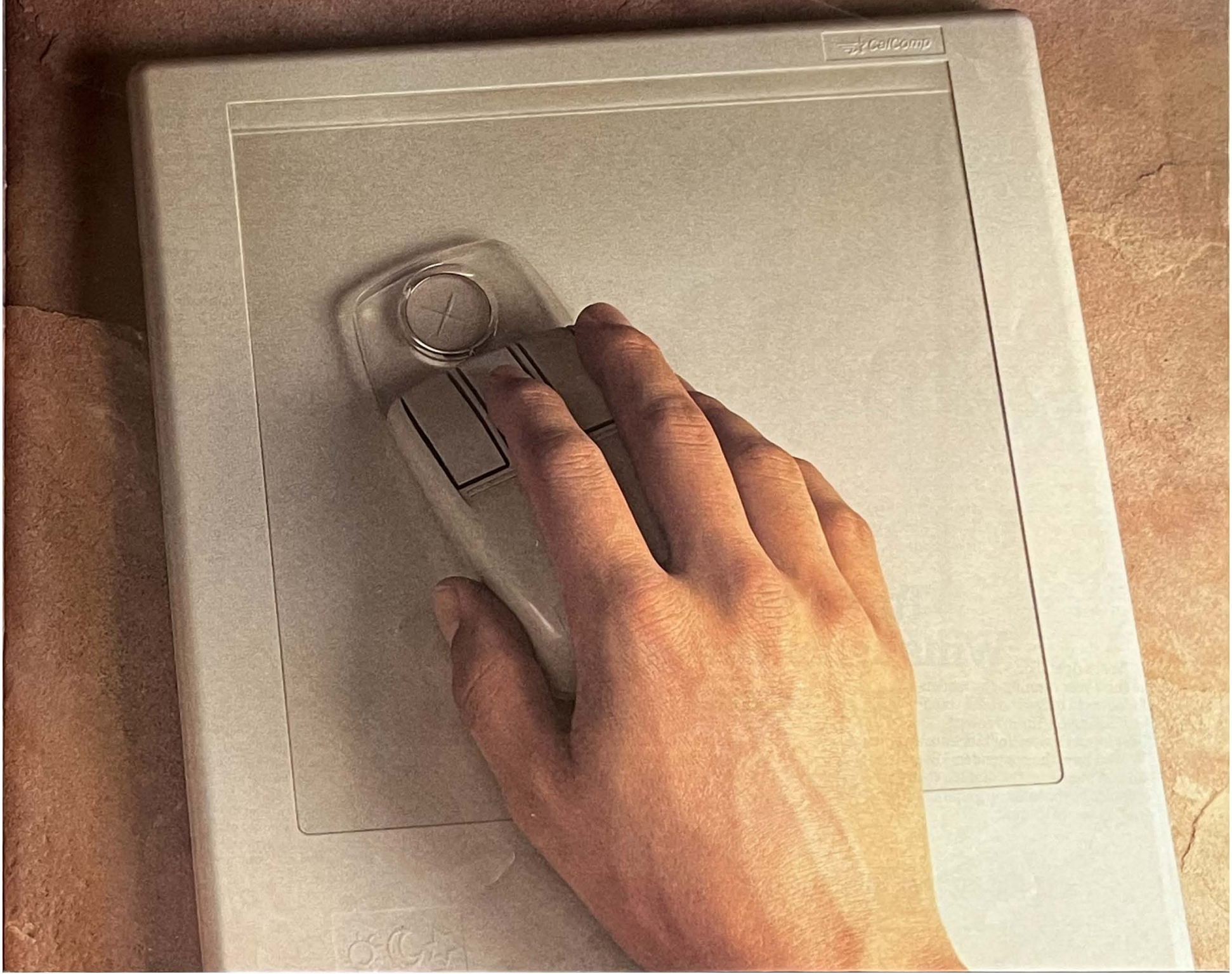
But the most amazing thing about WIZ is that you get it all for an introductory price under $200.

See WIZ at your local dealer or call 800-CALCOMP.

WIZ by CalComp. Everything else is just a mouse.

WIZ

Historic.



Best products

From Page 26

DOS Mounter, Dayna Communications
While we wish it were integrated with a file-conversion utility, DOS Mounter lets you read and copy DOS files seamlessly with a SuperDrive-equipped Mac.

Plus, Spinnaker Software Corp.; SuperCard, Silicon Beach Software
Both HyperCard extensions have strengths and both best the original in features, if not speed, pushing the technology into areas where Apple seems unwilling to tread.

SAM, Symantec Corp.
Symantec capitalized on the success of its disk utility package, SUM, by naming its virus utility SAM. The program lives up to its lineage. What's next? SIMM, a RAM disk utility?

SimCity, Maxis
Considering the plug SimCity got from John Sculley at the Portable intro, some people might think the game is really a secret intelligence program aimed at culling Apple secrets from executives' hard disks. We think it's the most original software in years.

Six best upgrades

MacroMind Director, MacroMind Inc.
Without it, Apple's multimedia advertising campaign would have no basis. Director's 24-bit color animation and scoring capabilities have no competitor.

MacWrite II, Claris Corp.
With up-to-date technology and faithfulness to the spirit and ease of use of the original, a program that once was free becomes worth paying for.

Persuasion 2.0, Aldus Corp.
Both Persuasion and Persuasion 2.0 were released in '89 and both are worthy of honor, but the upgrade stands out as the best presentation package available.

Relational databases: 4th Dimension 2.0, ACIUS; Double Helix 3.0, Odesta Corp.; FoxBASE+/Mac, Fox Software; Omnis 5, Blyth Software
All four products got major upgrades this year. 4th Dimension was the most eagerly awaited and perhaps best-received, but all deserve mention as excellent updates that finally put the Mac on par with the IBM PC in the database arena.

SUM II, Symantec Corp.
Symantec streamlined SUM's interface and made this set of disk utilities even more powerful. No Mac should be without it.

THINK C 4.0, Think Technologies
While this upgrade didn't get much fanfare, Mac developers are in seventh heaven. Think's Pascal and C languages are both Mac standards, but THINK C 4.0 brings object-oriented programming into the mainstream of Mac development.

Six items we wish we hadn't seen

The Mac 90-day warranty, Apple
When will Apple wise up and change its policy? Do Mac owners have to stage Eastern Europe-type riots to be heard? Ninety days just doesn't cut it.

Rodime hard drives sold by Jasmine Technologies Inc.; Quantum 80 drives sold by Apple
Even though the companies finally acknowledged and acted on the problems, these two hard disk fiascos left a bad taste in our mouths. If you can't trust major manufacturers with your data, whom can you trust?

Upgrade policies from Aldus Corp., Adobe Systems Inc. and Quark Inc.
Aldus and Adobe released separately priced products (PageMaker Color Extensions and Streamline) as add-ons to their popular desktop publishing packages. They should have been included as upgrades. Quark wins for charging up to $200 for its upgrades — nothing short of larceny.

Proliferating and conflicting INIT resources
We need System 7.0 now — or at least some guidance from Apple as to how to deal with multiplying, mysterious and maddening Startup document (INIT) and cdev conflicts.

AppleFAX modem, Apple
We still aren't sure this product works properly — after its third official "release."

FlashTalk, TOPS, a division of Sun Microsystems Inc.; DaynaTalk, Dayna Communications
These AppleTalk "accelerators" are overhyped and underpowered. They simply don't work as advertised unless you have a small, perfectly wired network. But in that case, why would you need an accelerator at all? □

Turbo Mouse.
Wins again and again and again.

That's right. For the third year running, the readers of Macworld magazine have voted the Kensington Turbo Mouse® "Best Input Device" for Macintosh® computers.

Who were the contenders? Every other trackball and mouse on the market. (Not to mention joysticks, keyboards and graphics tablets.) The winning secret? Simple.

Turbo Mouse is quicker, quieter, and easier to use. It delivers the winning combination of speed, precision, two buttons with extra features, and a comfortable, space-saving design—all for just $169.95.

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Mac community

From Page 21

computer users remain vulnerable to the threat of techno-terrorism. And last month's grimly worded statement from Apple acknowledging a sales slowdown not only sent the company's shares tumbling on Wall Street but also sapped the confidence of developers and dealers whose fortunes rest on Apple's.

Although part of the problem is a business downturn affecting the entire economy, Apple can do much to expand the market, reassure the community and give the Mac new momentum (see Apple: Extending the Macintosh advantage, Page 21).

But third-party developers, too, have a key role to play in keeping the Mac on track in 1990. It is primarily up to them — once Apple delivers beta versions of System 7.0 — to develop the applications that will turn Interapplication Communications, the Communications Toolbox and other new system capabilities from abstruse technical specifications into features that truly are useful.

It is also primarily up to the third-party community to produce the software that can bolster the Mac in markets where it lags, such as professional CAD and corporate database applications, as well as in a reinvigorated low-end market. One of the challenges developers face is to preserve the virtues that made the Mac in the first place — elegance, simplicity and consistency — while adding new levels of power to their programs. That won't be easy, but it's critical if the Mac is to maintain its distinctive appeal in a sea of competing graphical interfaces.

Dealers, too, can help the Mac move successfully into the '90s by improving the quality of service they provide. Even if, as we expect, Apple at last extends its warranties to an industry-standard year or more, it will still be up to the reseller channel to keep customers better informed about upgrades and glitch fixes and to offer the kind of extended training and support that increasingly complex Mac networks require.

The decade ahead. Beyond 1990, technological development will put computers of almost unimaginable power on our desktops, in our laptops and even in the palms of our hands.

For end users that means that the stuff of today's promo videos and science fiction will become everyday reality. Down the road we may see machines that combine the functions of a whole roomful of today's electronic devices — not only the computer but also voice-and-picture phone, fax, television, video recorder, scanner, color printer — in a single box.

One of the challenges developers face is to preserve the virtues that made the Mac in the first place — elegance, simplicity and consistency — while adding new levels of power to their programs.

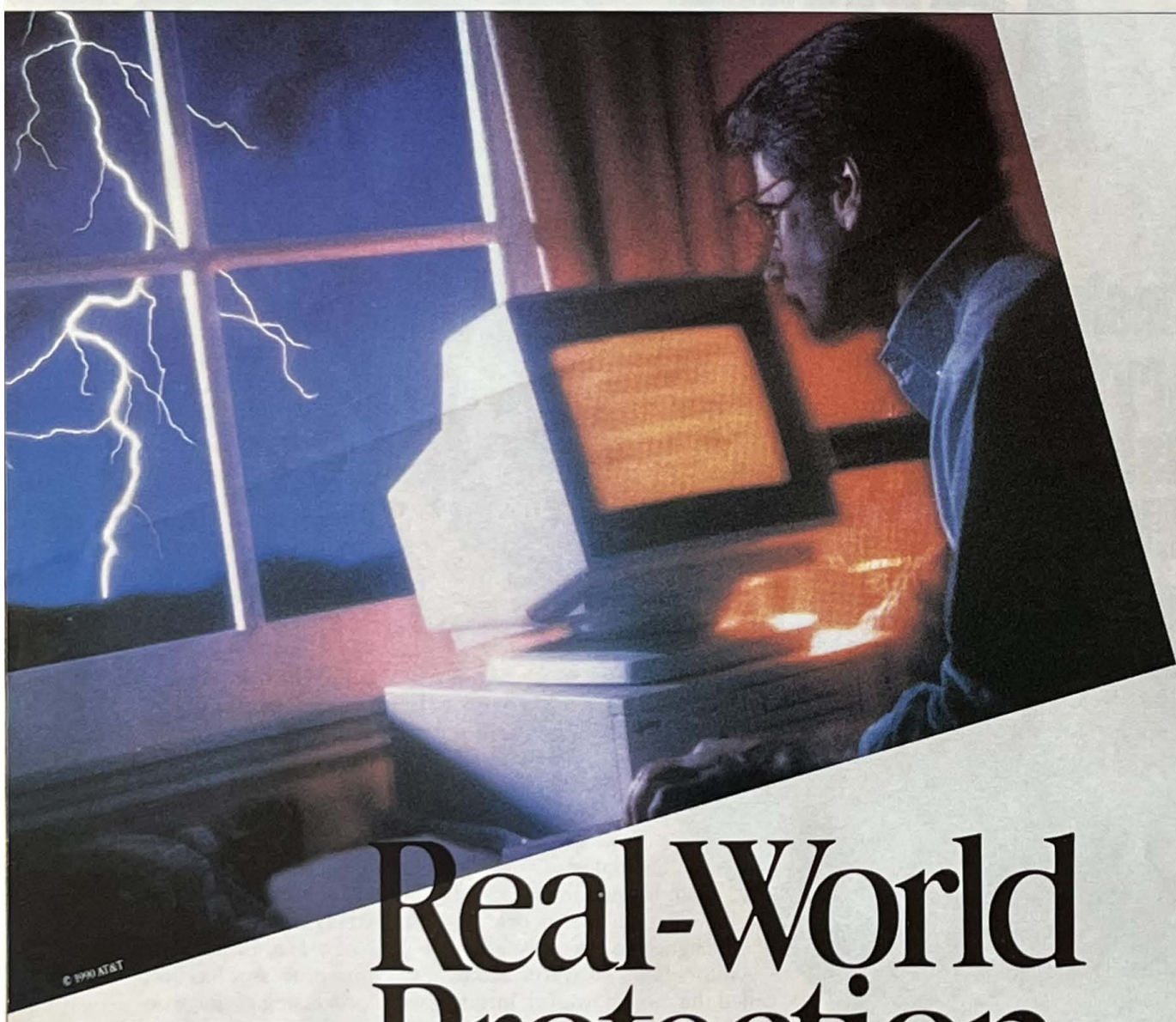
Complex multivendor networks — not only LANs but also WANs, perhaps eventually one big network linking all of us, just as the telephone system does today — will become the norm. Distributed processing and high-speed servers — for files, data and heavy computational tasks — will supplement the power of desktop machines.

Software will be modular and easily configurable: Managers, consultants and even end users will be easily able to construct and modify their own application environments, linking a variety of specialized modules and scripting their operations. Intelligent programs will adapt themselves to the user's habits and preferences, and electronic agents, anthropomorphic or otherwise, will stand ready to do our bidding.

For developers and dealers, all this means both vast opportunity and profound challenges. Installing and supporting such complex configurations will require resellers to develop new patterns of organization and staffing. What has until now been the principal channel of Mac distribution — the retail storefront, staffed too often by hastily trained sales clerks — may soon be obsolete, at least for the business market.

Developers will also have to look for new approaches. Software has long lagged behind the available hardware, and vaporware and incompatibilities are already the bane of the industry. As hardware moves to new levels of complexity, these problems will only be compounded, and even the arrival of new object-oriented development tools will offer only partial solutions.

Distribution, too, will have to take new forms as users increasingly look for specialized modules to integrate into their custom environments. Site licensing, subscription services and electronic distribution, with fees perhaps based on usage monitors built into programs, may make the shrink-wrapped package an anachronism. □



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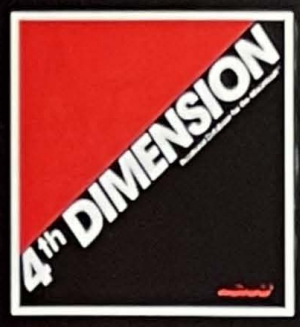

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- Rectangle
- Circle
- Oval
- Grid
- Lines

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- Check boxes
- Graphs
- Thermometers
- Rulers
- Dials
- Radio buttons
- Radio pictures
- Invisible buttons
- Highlight buttons
- Pop-up menus
- Scrollable areas

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- Compatible with AppleShare, TOPS, and 3Com 3Plus Mac
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- Remote data file and local structure file
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- Interactive symbolic debugger
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- 3 loop structures: For, While, and Repeat
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System Requirements
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- Hard disk required
- AppleShare and MultiFinder compatible
- 1 MB of RAM

Specifications
- 100 files
- Up to 16 million records per file
- Up to 1 billion characters per record
- Unlimited relations between files
- 511 fields per file
- 9 field types: Alpha, Text (up to 32,000 characters), Integer, Long Integer, Real, Date, Time, Boolean, and Picture
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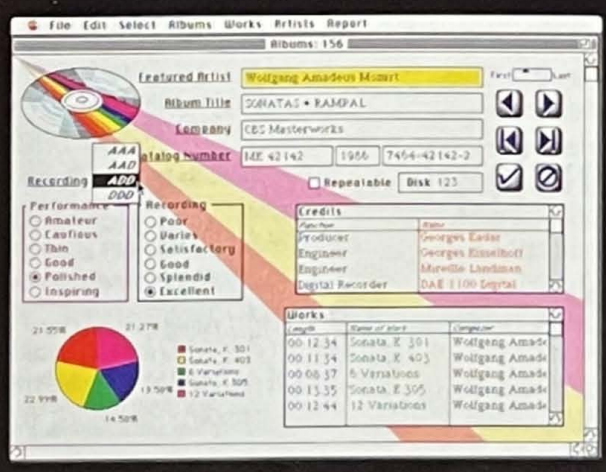

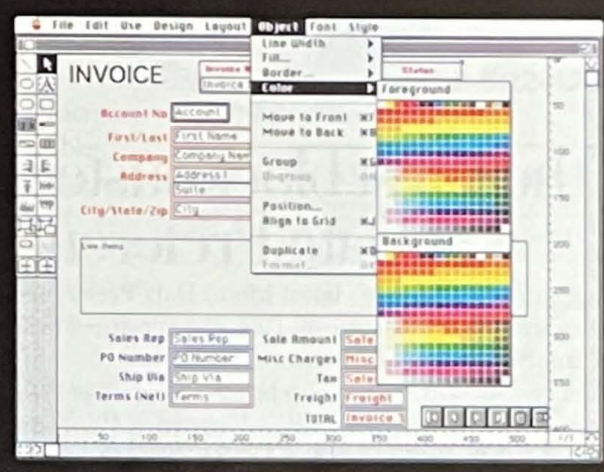

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ACIUS

Apple

From Page 21

has been unable to fulfill orders for popular products, such as the Mac IIcx and the Mac Portable.

Apple's success this year also will be tied to System 7.0 and connectivity products that integrate the Mac into enterprisewide networks. System software enhancements, such as virtual memory and Interapplication Communications, will help create an application environment that plays well against OS/2, which is just emerging from its shell.

1991 and beyond. The Mac product line will continue to evolve in logical ways, with more-powerful desktop and portable computers. Expect Apple to address the high end of the market with 68040-based machines in 1991 that include built-in Ethernet, a digital signal processor, on-board 24-bit video and an I/O processing system. About the same time, Apple will probably add a 68030-based portable, and perhaps by 1992 a laptop Mac weighing less than 10 pounds.

Sometime in the early part of the decade, the Apple II will die a quiet death, and new versions of the Mac will fill the gap as the less-than-$1,500 color machine suited for the education and home markets.

The $400 million plus in R&D spent last year and in the coming years will pay off in the mid-1990s with a next-generation machine that will supersede the Mac.

Most likely beyond the Mac are RISC-based machines and a rewrite of the operating system that will include capabilities such as protected memory, which in a multitasking operating system allows applications to run in separate partitions in memory.

Ideally, Mac software, which would be incompatible with a new software and hardware architecture, would run on a RISC-based machine in an emulation mode. In addition, future object-oriented system software will support a wide variety of data types and allow users to easily wire up applications out of distinct components optimized for specific tasks.

It's also possible that in this decade Apple may finally decide to license its proprietary technology to outside developers, as have IBM and Sun Microsystems Inc.

Closing in on the next century, the Mac will seem like a Model T or even a wheelbarrow. Imagine a machine with a thin flat-panel color display with 2,000 mips (millions of instructions per second), Integrated Services Digital Network and multiple processors that accepts voice commands and seems to anticipate your requests. Perhaps the Knowledge Navigator touted by Apple CEO John Sculley isn't science fiction after all. □

Mac managers

From Page 21

al memory and expanded networks.

More complex is the problem of integrating individual desktop machines and local Mac networks with mainstream corporate systems. Apple has begun to roll out its series of CL/1 client and server software, making it possible to tie in Macs as front ends to the corporate database. Building applications with these tools will require a significant investment of funds and technical talent, but the bigger issue may be organizational obstacles put up to prevent users from accessing corporate data. Mac managers will need to rely on their political skills to convince MIS departments and top management that such access will provide strategic advantage to the organization.

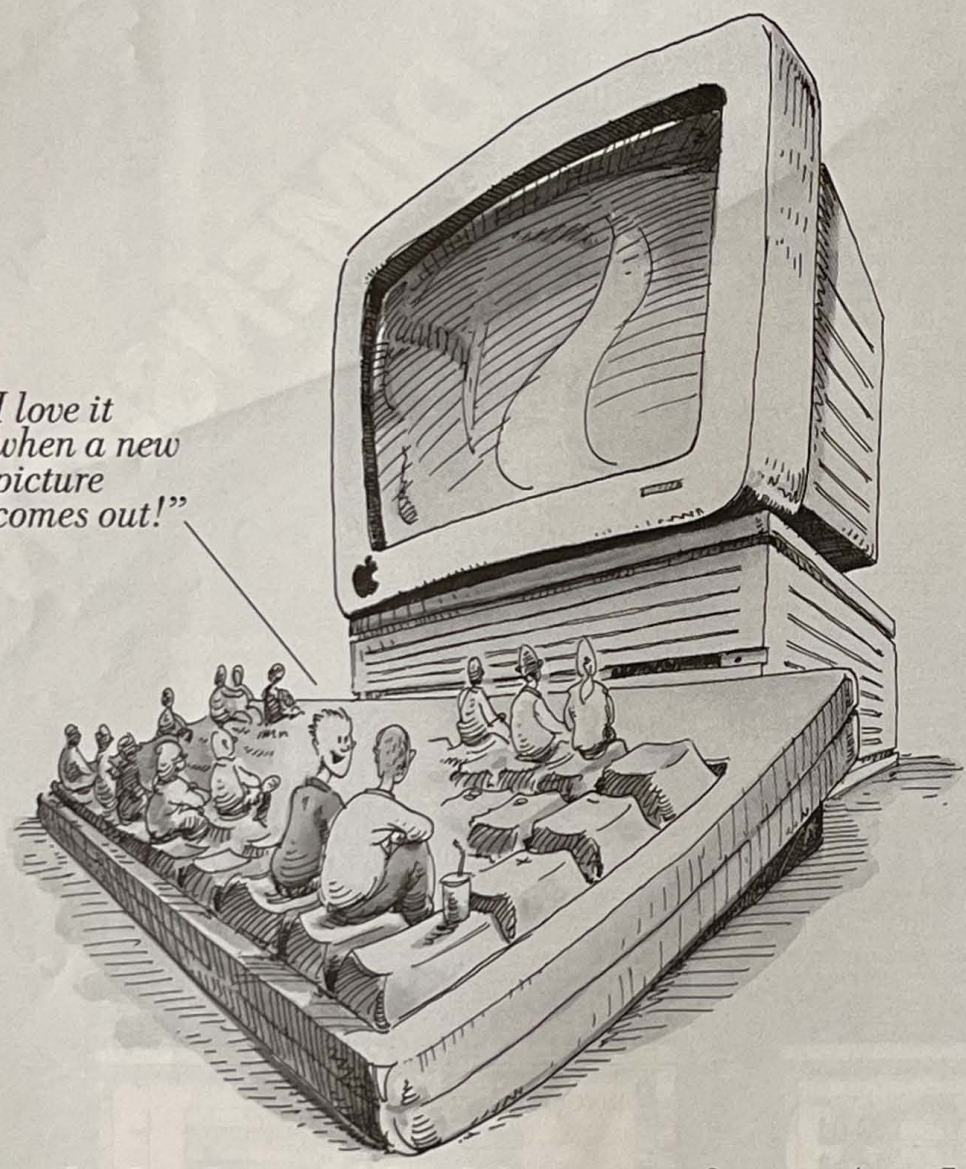
One way to accomplish that is by implementing such systems at the top of the organization in the form of executive information systems. With CL/1, the Mac is ideally suited as a window on corporate information for executives. If Mac managers can successfully install such systems, it will be easier to win approval for more-widespread use of Macs connected to the corporate database.

Probably the most difficult challenge for Mac managers in 1990 will be cost justification of new purchases. With the general economy flattening after five years of robust growth, corporate computer purchases in general will be subject to increased scrutiny. And since Apple extracts a modest price premium on Macs over competitive personal computers, Mac managers will be especially hard pressed to justify purchasing them.

Into the future. The latter task will intensify as we look further out into the decade of the '90s. Personal computing must become fully aligned with the fundamental goals of the organization, or else management can be expected to crack down on spiraling spending.

The issue is primarily a matter of organizational psychology. Personal computers have contributed to a democratization of the work place and a flattening of the traditional corporate hierarchy. These trends bring obvious benefits to organizations, but they must be managed to prevent inefficiencies or even anarchy.

Computer managers can help manage this process by building distributed processing systems that take advantage of creative input from diverse sources while addressing the strategic goals of the company. As the 1990s progress, the Macintosh can be a key building block in assembling the new generation of corporate information systems. □



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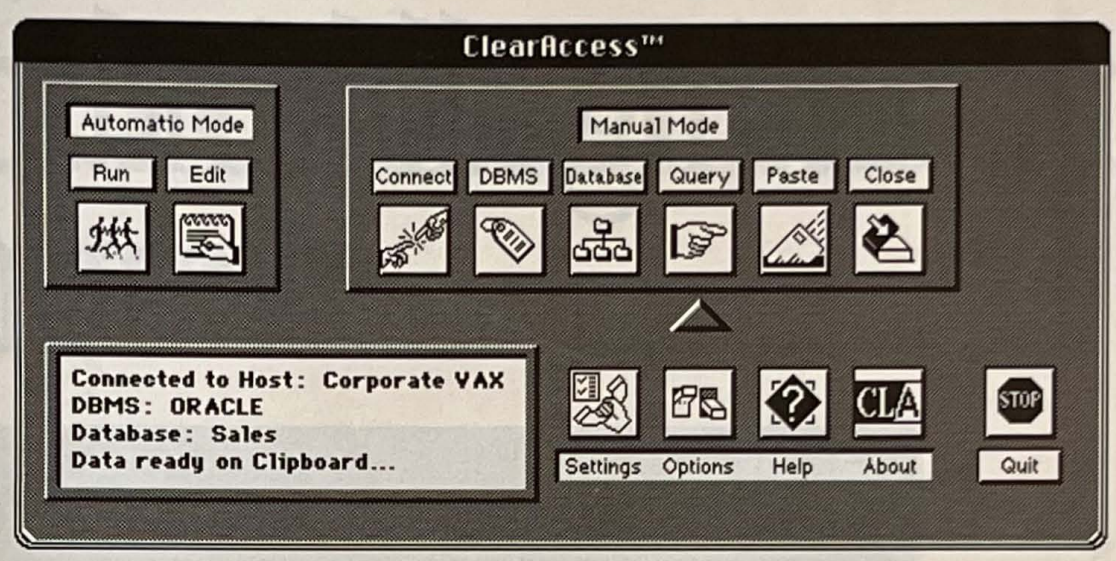

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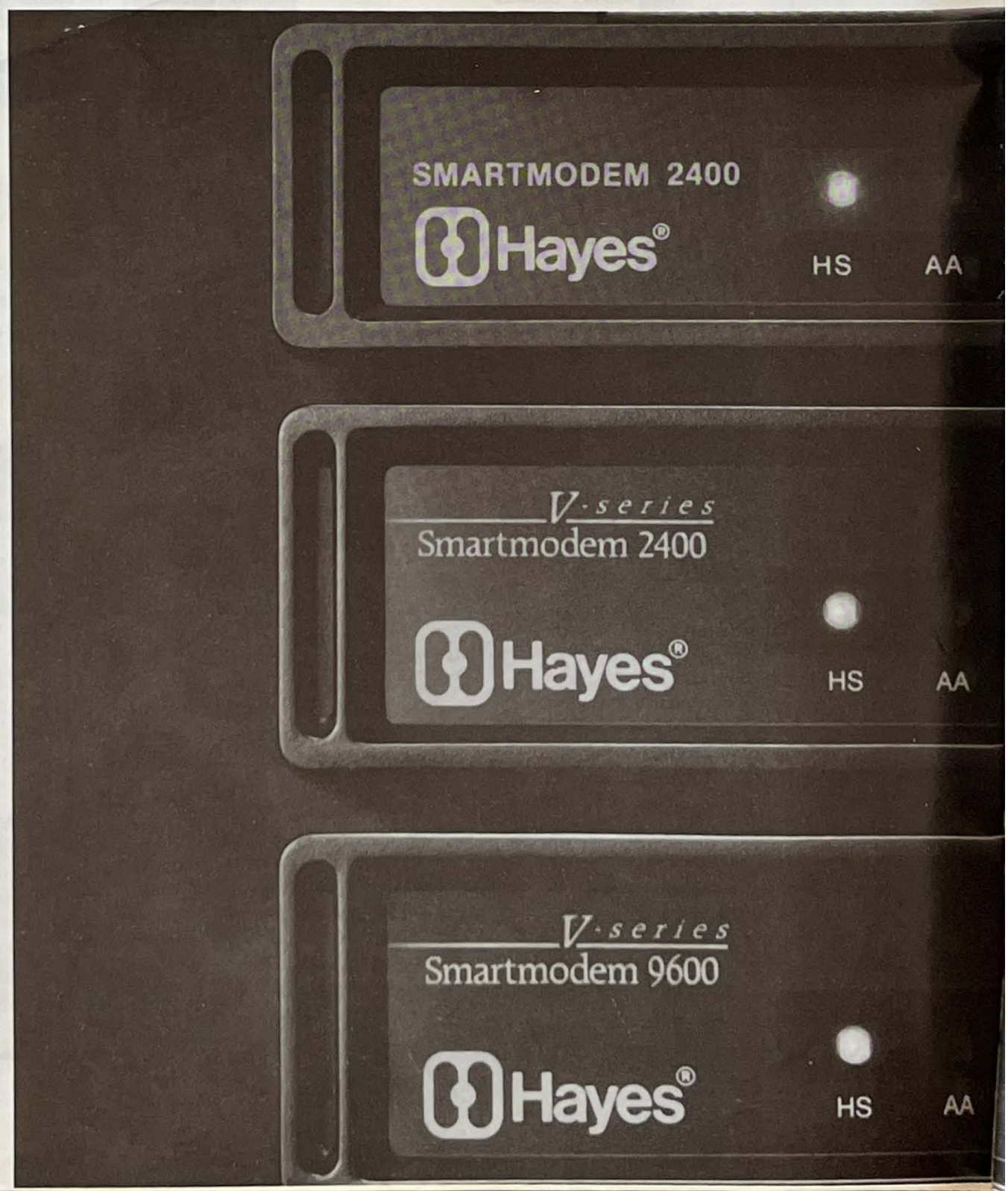

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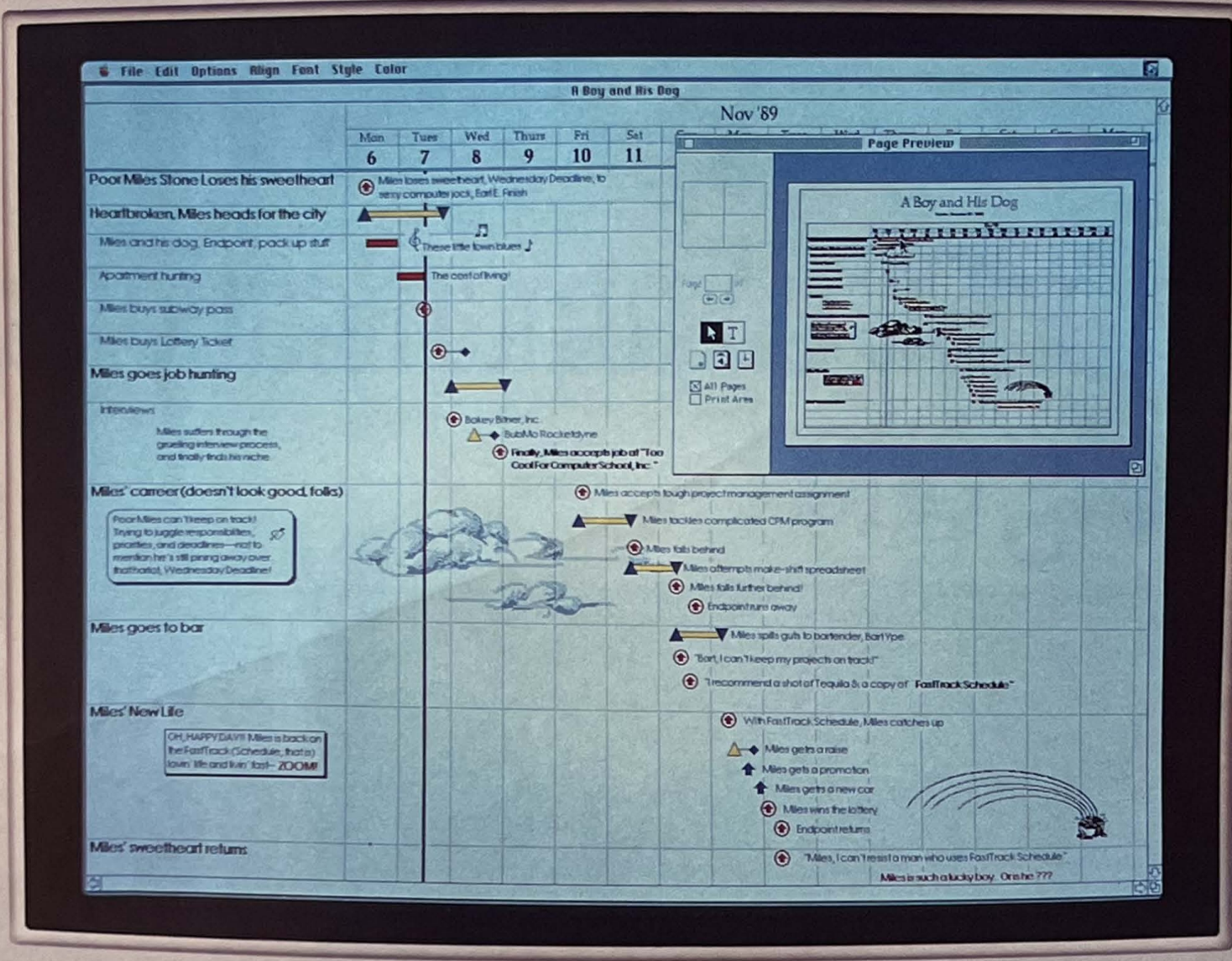
File Edit Options Align Font Style Color
A Boy and His Dog
Nov '89
Mon 6
Tues 7
Wed 8
Thurs 9
Fri 10
Sat 11
Poor Miles Stone Loses his sweetheart
Miles loses sweetheart, Wednesday Deadline, to sexy computer jock, Earl E. Finish
Heartbroken, Miles heads for the city
Miles and his dog, Endpoint, pack up stuff
These little town blues
Apartment hunting
The cost of living!
Miles buys subway pass
Miles buys Lottery Ticket
Miles goes job hunting
Interviews
Miles suffers through the grueling interview process, and finally finds his niche
Bakey Biker, Inc.
BubMo Rocketdyne
Finally, Miles accepts job at "Too Cool For Computer School, Inc."
Page Preview
A Boy and His Dog
All Pages
Print Area
Miles' career (doesn't look good, folks)
Poor Miles can't keep on track! Trying to juggle responsibilities, priorities, and deadlines—not to mention he's still pining away over that harlot, Wednesday Deadline!
Miles accepts tough project management assignment
Miles tackles complicated CPM program
Miles falls behind
Miles attempts make-shift spreadsheet
Miles falls further behind!
Endpoint runs away
Miles goes to bar
Miles spills guts to bartender, Bart Ype
"Bart, I can't keep my projects on track!"
"I recommend a shot of Tequila & a copy of FastTrack Schedule"
Miles' New Life
OH, HAPPY DAY!!! Miles is back on the FastTrack (Schedule, that is) lovin' life and livin' fast– ZOOM!
With FastTrack Schedule, Miles catches up
Miles gets a raise
Miles gets a promotion
Miles gets a new car
Miles wins the lottery
Endpoint returns
"Miles, I can't resist a man who uses FastTrack Schedule"
Miles is such a lucky boy. Or is he ???
Miles' sweetheart returns

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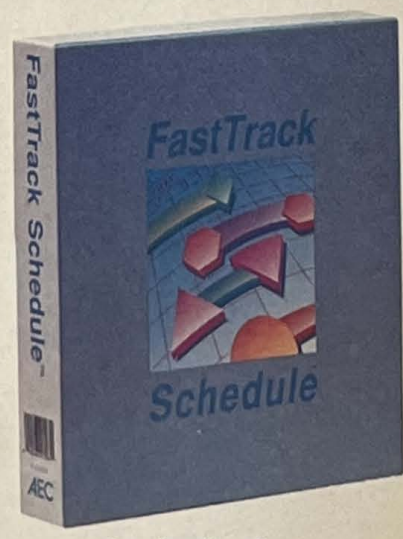

4½

October, 1989 MacUser Magazine

Another quality project-oriented productivity tool from AEC Management Systems, Inc.

MacWEEK

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COMPARISONS

Data Desk 3 and JMP: Exploratory data analysis

Data analysis is moving away from formal hypothesis testing.

By Clay Andres

You don't need to carry a statistics package with you when you set out to walk across the South Pole. But if you were counting penguins on your expedition, you might want one when you got back — preferably one that didn't require the effort of a polar trek to learn and use.

Data Desk 3, the latest version of an early Macintosh program from Odesta Corp. of Northbrook, Ill., and JMP (pronounced "jump"), a new application from SAS Institute of Cary, N.C., maker of the world's most widely used statistics packages, are part of a growing trend away from formal hypothesis testing and toward interactive data exploration.

From its humble beginnings as an Apple University Consortium project, Data Desk 3 has become a large and authoritative program. Some of the innovative tools of previous versions have been refined, such as the HyperViews capability, and a lot of statistical power has been added, most notably in the General Linear Model (GLM) design interface.

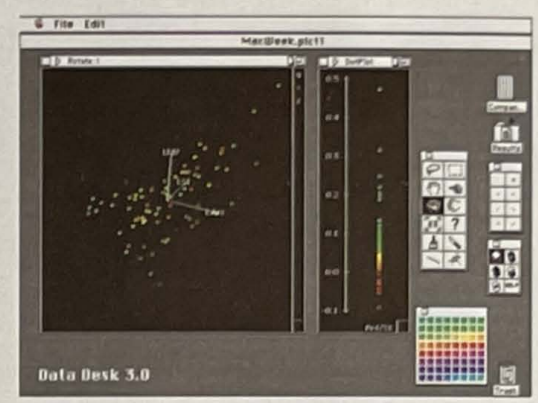
JMP starts life with the clout of SAS behind it, but the program is a decided break from the SAS tradition of maximum power at a high cost. Unlike mainframe look-alikes Systat (see MacWEEK, Sept. 13, 1988) and SPSS, JMP was designed from scratch as a graphically oriented statistics package for the Macintosh. It uses some of the tools popularized by Data Desk, such as 3-D plot rotation, and has added innovations of its own.

Data Desk, which introduced Exploratory Data Analysis to desktop computing and popularized many of its features, prides itself on being a full-fledged implementation of EDA, the current trend in data analysis (see sidebar, Page 48). JMP's developers, who are experienced statisticians, included the parts of EDA they believed were most useful. JMP is therefore similar to Data Desk in many ways, but it is not meant to be solely an implementation of EDA methodology. The program seems to be geared toward the general and academic markets with its low student price, streamlined interface and ease of use. JMP's $89 student version imports only 500 cells at a time, but it can import multiple times for a single data table. Data Desk 3 seems to be aimed at the serious number crunchers.

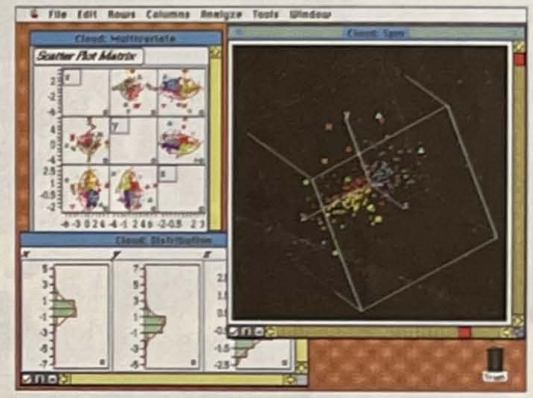
JMP. JMP has a clean, almost simplistic interface. Data can be imported or typed directly into a table, which is as familiar and easy to manipulate as a spreadsheet.

There are no long lists of commands; instead, JMP runs all of its analyses from just six menu options, called platforms. Each col-

See Comparison, Page 42



Data Desk's rotating plots can represent additional information by using colors and symbols. The colors and symbols in this plot of market value, assets and sales represent different aspects of companies, such as their profitability.



JMP's Spin capability produces 3-D rotating plots with built-in features for presenting principal components as 2-D scatter plots.

TRENDS

Spreadsheets keep the pace

Spreadsheets hold their own in the rapidly changing world of computers.

By Lawrence Stevens

Rows, columns and numbers stretching as far as the screen can scroll. Basic, mundane and common as mud — the quintessential workhorse. Yet spreadsheets are still found at the leading edge of personal computing as adjuncts to databases, statistical work, accounting and even graphics.

Familiar user interfaces, beefed-up programming environments and relatively new graphics capabilities provide diverse ways for spreadsheets to work with other programs.

Playing the numbers. Anything that can be expressed as a formula can be computed with any Macintosh spreadsheet. But writing and debugging long series of formulas to perform complex operations such as statistical analysis can seem a bit like reinventing the wheel. Luckily spreadsheets can be used to collect, organize and then feed data into more-powerful math and statistical analysis applications.

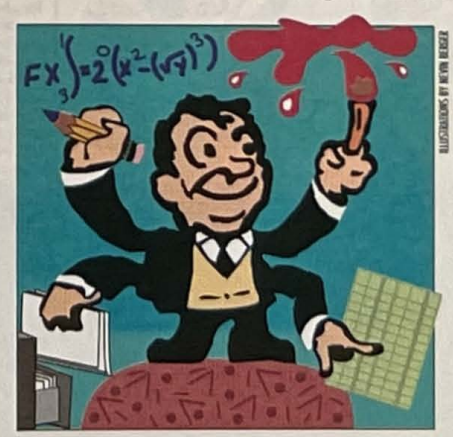


ILLUSTRATION BY MARK ULRICH

Rosanne Richardson, a principal of Marsh and Moor Inc., a social-science research company in Waynesville, N.C., uses Systat, a statistical analysis package from Systat Inc. of Evanston, Ill. She compiles and organizes her data using two spreadsheets, Wingz from Informix Software Inc. of Lenexa, Kan., on her Mac and Paradox, a PC-based spreadsheet from Borland International of Scotts Valley, Calif.

"Systat is fast and easy to use. But it's very finicky in how the data has to be entered," Richardson said. "Paradox and Wingz don't care what the data looks like, so they're good for collecting data and getting it into the format I need."

Counting beans. Spreadsheets also can be used for accounting. But few users find themselves able to create their own accounting system. It requires both the ability to write a program using a spreadsheet's high-level macro language and detailed accounting knowledge.

"I could learn how to use Excel after a week or two of study," said John Lutes II, president of John R.

See Trends, Page 42

Industry Challenged To Take Role In Education

PART IV SOLUTIONS

As we have seen, the inadequacy of the U.S. labor force is reaching crisis proportions. The average literacy level of today's young adults is below the average level needed by the job market. In the next ten years, the job market will demand an ever higher level of proficiency in reading and math. Many young adults with only a high school diploma or worse, will effectively be shut out from the job market as demand for unskilled, manual labor jobs decreases. This ever growing segment of the population will become a drag on the economy due to increased unemployment.

Corporations can ill afford not to try and remedy this situation, for if they do not, they will not have a satisfactory pool of job applicants from which to choose the workers to fill the positions which will develop in the next several years. The jobs will have to be filled by unqualified, uneducated workers. This will create lower productivity and thus a lower standard of living across the board. This, of course, has worldwide implications as well, adversely affecting U.S.

Sponsor curriculum development

As corporations assess key skills required over the next several decades, they should cooperate with high schools and junior high schools to develop programs that breed interest and proficiency in these areas. Corporations can even sponsor extracurricular activities such as science, computer or speech clubs that would reproduce real-life situations. Exposure, experience and excitement about the field can grow together.

Reward those who graduate

Corporations can offer guaranteed part-time employment to students who agree to remain in school and pursue courses preparing them for careers in their chosen field. Students perceive an incentive to stay in school and to experience a variety of disciplines.

Support employee involvement in school activities

Corporations should encourage executives to spend time with students in the classroom. The man-hours forfeited would be repaid many times over. For students, school becomes a more interesting environment with clear attachments to the outside world. At the same time, the company builds a close relationship with young people with keen

"THE BEST COMPUTER FOR PUBLISHING EVER MADE."

The words are those of Jonathan Seybold, perhaps the most respected voice in desktop publishing. His newsletter, The Seybold Report, reaches some 200,000 publishers–of whom we estimate 199,990 have never even tried a NeXT™ Computer.

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The NeXT machine has caused many to believe that it was designed exclusively for publishing. Not a bad theory, considering the evidence.

To begin with, the NeXT Computer is the first pure PostScript® machine. You can work on-screen with the hundreds of fonts in Adobe's type library. You can output to any PostScript device, be it laser printer, slide maker or the highest quality professional typesetter. And what you see on the display is precisely what will print.

As the rest of the industry explores ways to accomplish this feat, in a year at best, only the NeXT Computer can do it today.

In addition, the quality of the image itself is raised dramatically.

The NeXT MegaPixel Display provides a huge workspace, with sharpness and detail you haven't seen on a computer before. The NeXT Laser Printer, at 400 dots per inch, offers over 75% greater resolution than the current 300 dpi standard.

Ours is also the only system to offer optical storage as a standard feature. A single optical disk (256 megabytes) lets you store and transport multiple versions of long documents, rich in graphics–along with expansive libraries of fonts and art.

The NeXT Computer streamlines the entire publishing process. FrameMaker® software combines writing, graphics and layout tools in one publishing package. Which brings an end to the tradition of forever bouncing between programs, "importing" and "exporting" as you go.

And, thanks to true multitasking, you can instantly access other applications.

The NeXT Digital Library,™ for example, is always at hand. It includes entire books, such as Webster's Ninth New Collegiate Dictionary® and Collegiate® Thesaurus. Or archives of your past work, in which you can pinpoint text or graphics in seconds, to copy into new documents.

NeXT Mail makes publishing a truly collaborative process. Unlike ordinary e-mail, it lets you send and receive messages that include text, graphics, voice, even entire documents. Never has there been a more effective way to locate information, receive comments and get approvals.

And, as Publish! magazine recently reported, the NeXT Computer "offers a staggering price advantage" when compared to personal computers configured for desktop publishing.

To receive our publishing brochure, call 800-848-NeXT. While you're on the line, ask for the location of your nearest Businessland Center. There, you can get some hands-on experience with the world's most sophisticated desktop publishing system.

And get a quote on a system all your own.

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Trends

From Page 39

Lutes Co., a sporting goods distributor in Niles, Mich. "But there was no way I could learn how to be an accountant in such a short time."

When Lutes bought his six Macs, he also purchased several copies of Excel from Microsoft Corp. of Redmond, Wash., to track commissions and sales figures, maintain mailing lists, and chart comparative sales volume from month to month. But the goal of computerizing his bookkeeping was more elusive.

Although Lutes could collect raw accounting figures in Excel, he leaned heavily on his accountant to make sense of the numbers. Lutes turned to Insight Expert, an integrated accounting system from Layered Inc. of Boston. This allowed him to dump raw numbers from Excel into Insight, thereby bringing his payables, receivables and general ledger operations in-house.

The strict structure in accounting packages, while a blessing to companies like Lutes', may be a curse to those whose accounting does not fit standard models. Many of these organizations resort to a spreadsheet as an extension of an accounting program.

Siesta Key Utility Co., a water and waste-water utility in Sarasota, Fla., must conform to government-mandated reporting procedures that require, for example, that "material and supplies" be broken down into eight subcategories. Siesta's accounting package, Great Plains Accounting Series from Great Plains Software of Fargo, N.D., was not up to producing the required format, so Siesta used Excel.

"We were able to customize the reports so well that most people didn't even know we had changed computer systems," said John Lester, Siesta general manager.

Comfortable as an old shoe. Although spreadsheets are rarely used for large or complex databases, they often serve as companions to powerful database programs. Especially at the high end, many users find database interfaces alien and difficult to understand. But familiar spreadsheet interfaces can make interaction with databases easier, particularly for casual users.

Faced with the dilemma of delivering a powerful database for hospital administrators, Dan Rossiter, a programmer for a Santa Barbara, Calif.-based developer of hospital information systems, combined the HyperCard-like fields and buttons of the Wingz interface with the power of Omnis 5 from Blyth Software of Foster City, Calif. Once data is entered through Wingz it is transferred to Omnis 5 with a utility from Informix.

Generally, database management systems are better than spreadsheets at searches.

But Ray Heizer, whose company, Heizer Software of Pleasant Hill, Calif., markets Excel templates, macros and training programs, has found that for custom searches of his FileMaker II database, the flexibility of Excel serves him better. FileMaker II, he said, has no way to find duplicates that do not exactly correspond within a field. To solve this problem, Heizer created an Excel macro that flags potential duplicate records. Heizer then imports a few thousand records at a time to Excel to check for and delete duplicates before returning the files to FileMaker.

Paint by numbers. Those who use the Mac for graphics and those who use it for number crunching have tended to sit on opposite sides of the aisle in users groups. But the ability to generate accurate, visually appealing graphs in spreadsheets may be bringing them together.

Joe Cillo, president of Presentation Arts of San Rafael, Calif., creates more than 1,000 presentations a year, mostly for the financial community. Prior to adopting Trapeze from DeltaPoint Inc. of Monterey, Calif., he used drawing software such as MacDraw to create overheads, slides and paper output for his presentations. Eventually he realized that many of his jobs used the same categories of data, only with different numbers. Now he creates most of his presentations with Trapeze, letting it generate his charts. When he is finished, he saves the spreadsheet as templates.

The Maine Department of Education also uses a spreadsheet, Full Impact from Ashton-Tate Corp. of San Jose, Calif., to speed up the generation of reports and graphics. Each year, the 294 school districts in the state send raw data to the Department of Education on subjects such as attendance and teachers' level of education. A few months later, the department sends a report back to the districts. Until last year, the reports were so arcane that few of the superintendents would or could read them. In an effort to design a more readable and timely report, the department asked for help from Greg Melick, then a manager of a chain of Computerland stores. Melick reasoned that

since the data was coming from the department in the same format, he should be able to program a spreadsheet to generate the reports automatically. Choosing Full Impact because of its integrated worksheet/chart pages, he wrote a macro that takes the data from the Department of Education and, in three minutes, creates a custom report with formatted text and graphics.

Keeping the pace. Spreadsheets, whether working in the background to sort and organize information, providing easily comprehended interfaces, or supplying graphs, continue to prove that they can keep up in ever-changing personal computing environments.

"Specialized applications are for special uses," Heizer said. "But spreadsheets' flexibility to solve so many different kinds of problems ensures they will never become obsolete." □

Comparison

From Page 39

umn or variable is given a measurement level (interval, ordinal or nominal), and JMP selects the appropriate plots and statistics based on those designations.

For instance, choosing Distribution of Y platform for ordinal data produces a histogram and a stacked bar chart, plus a list of counts and probabilities. The same analysis for interval data produces a histogram and a quantile box plot, plus a list of quantiles and moments, including the mean deviation, standard deviation and t-ratios.

The advantage of this approach is that you get a lot of information from one click, although often it is more than you wanted. There is some room for customizing the output of the reports, but you can't control which tests you get where. You can run multiple tests and compare across windows, but the displays within the windows are relatively fixed.

JMP shows its strength when you start fitting linear models. When you choose the Fit Y by X platform, JMP creates a scatter plot. At the bottom of the window is a Fitting button that pops up a menu of four different fits or density ellipses. Each scatter plot can have multiple fits and each fit has its own list of accompanying statistics.

JMP's other analysis platforms allow multiple x's, 3-D spins, multiple y's and custom-defined models for treating special effects. There is a Journaling command that saves the front window to a special file for use in making presentations.

JMP has a built-in calculator for computing derived variables, and you can build formulas quickly by clicking on variables and

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MacInTouch

RIC FORD AND RICK LEPAGE

Chasing copyrights on the legal carousel

ISSUES & TRENDS

Round and round. Pump up the pipe organ, start the carousel and give Xerox Corp. the wooden steed behind Apple. Another litigant has climbed onto the look-and-feel merry-go-round, another player hoping to grab the ring and ride past its competition to the fabled reward money.

It is supremely ironic that Apple finds itself in this position. Apple, the protector of the interface and keeper of the flame, has spent more time over the past years ambushing potential competitors than it has improving its aging iconic desktop. Now, having caused a traffic jam in the courts, Apple finds itself rear-ended by a ghost from the past, one we all assumed had been taken care of years ago through deals and benign neglect.

With the emphasis upon royalties and damages, this general climate of litigation and grandiose posturing over software copyrights is spinning into a frenzy. Soon we expect to see copyright bounty hunters scouring the country's universities and old-age homes, looking for anyone who ever drew a garbage can on a napkin or an arrow cursor on a screen.

Saving the industry. We don't buy Xerox's lofty pronouncements that it is somehow protecting the computer industry by prohibiting Apple from carving out royalty payments from unsuspecting companies that derived their interfaces from the Lisa/Mac platform. Let us at least take the suit for what it is: a strike by one company at its most conspicuous target. Through the suit, Xerox

KEVIN BERGER

seems to breathe hope again that it can leap into the center of the industry. The problem with this approach is that Xerox wants to benefit from someone else's innovation instead of achieving success on its own merit.

Rich Coulombre, a partner in The Support Group, a training and consulting firm in Wellesley, Mass., worked at both companies. "At Xerox, it took 40 layers of management yeses to get something to happen, and at Apple you just did what you felt was right," said Coulombre.

That kind of attitude would explain how Apple and Adobe could make so much money commercializing the research that Xerox itself was incapable of moving out into the street.

Rhinestone royalty. Xerox reminds us of modern pretenders to the thrones of Europe, who, decades removed from the time of their ancestors' rule, live in posh splendor in some other land. Surrounded by a cadre of lackeys and wealthy hangers-on, these pseudo-royals live in the past, truly believing that someday they will be restored to their regal splendor. Xerox lives in this fairy-tale world as the aging grande dame who squandered her research treasures and now wants money from companies that invested them more wisely.

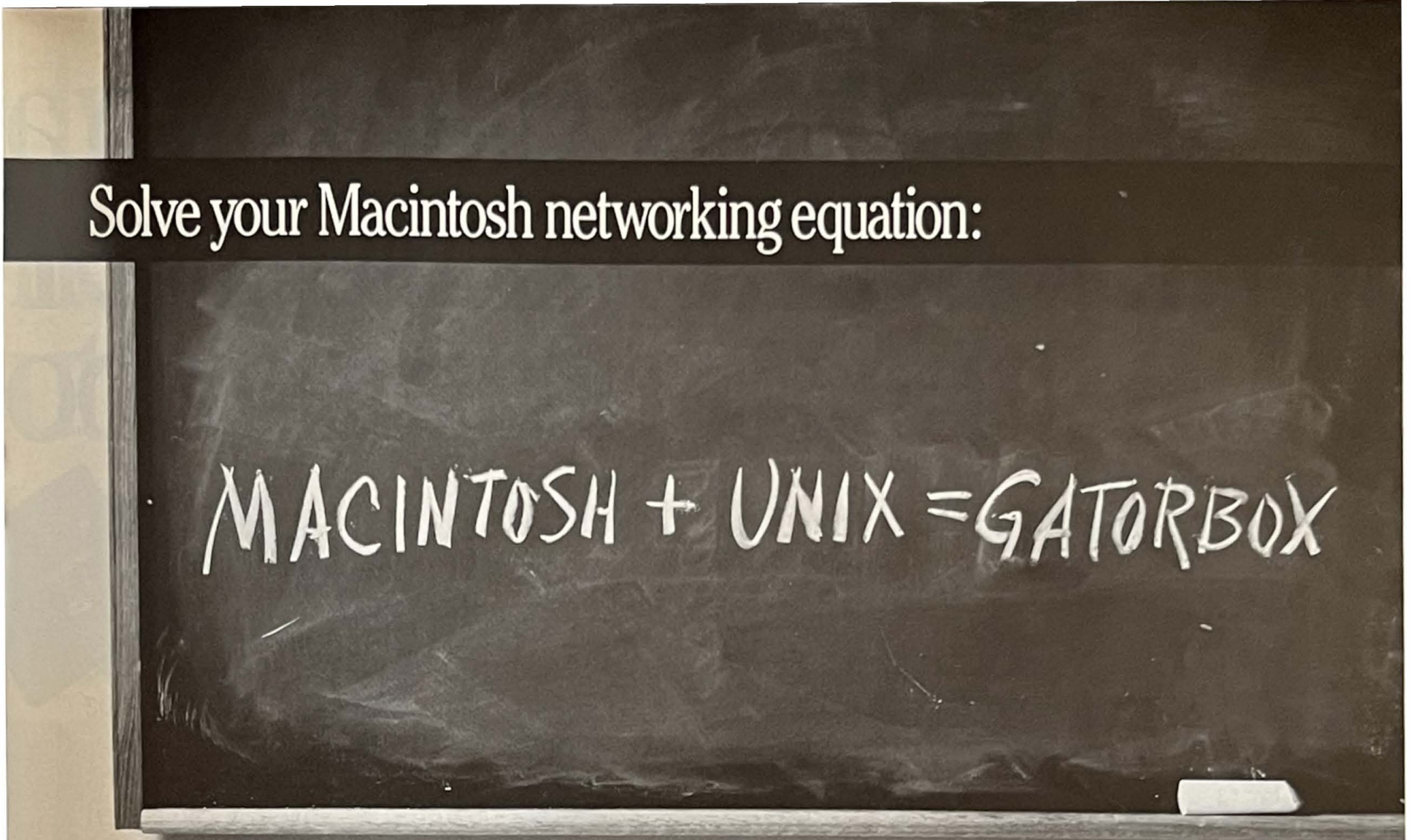
Twelve confused men. The scary thing about this lawsuit is that it moves Apple onto shaky turf far from home. If Xerox gets its jury trial, imagine the reactions of 12 men and women who have little, if any, familiarity with the underpinnings of computer technology. To them, an IBM PC running Windows might look and feel like a Xerox Alto. The outcome of such a trial is about as predictable as an earthquake, and it could shake the computer industry's foundations.

Descending into the realm of the courts to fight industry battles is a shortsighted tactic — nothing but milking limited technology — that will hold back the sparring companies while true innovators leap ahead.

Apple, with its protectionists and lawyers, has been in the vanguard of this disturbing trend, a complete turnaround from the Steve Jobs days of pushing the envelope. Now that the company is coming face to face with its past, it's time to rise above petty legal disputes and return to inventing the future. The way things are going, however, please forgive us if we don't hold our breaths.

We welcome comments at MacWEEK, 4 Cambridge Center, Third Floor, Cambridge, Mass. 02142; (617) 497-2600. Electronic Mail: CompuServe: (Ric Ford) 75056,1225, (Rick LePage) 76117,1765; Delphi/PAN: MACWEEKBOS; GEnie: MACWEEKBOS; Connect: RICKLEPAGE, RICFORD; MCI Mail: MACWEEKBOSTON; Internet: MACWEEKBOSTON@MCIMAIL.COM; AppleLink: (address "MacInTouch" in Subject): MACWEEK.

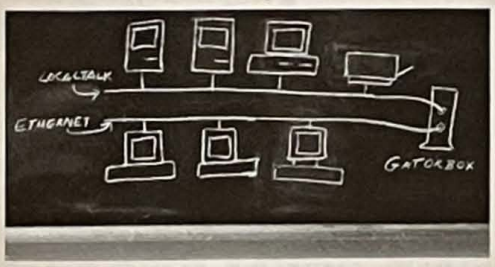
Solve your Macintosh networking equation:



The Cayman Systems product family adds up to your complete solution for networking Macintosh and UNIX computers.

The GatorBox® is the most powerful Mac-to-Ethernet gateway you can buy. It connects your Macintosh networks to Ethernet quickly and easily. Macintosh users on both LocalTalk and Ethernet can share laser printers, electronic mail and valuable storage.

Not just an AppleTalk router, the GatorBox supports TCP/IP. Which means that Macintosh computers gain access to UNIX hosts right from the desktop. NCSA Telnet™, included with the GatorBox, provides easy terminal emulation and file transfers.



The GatorBox integrates Macintoshes with Sun, DEC, NeXT and other UNIX computers.

Users of Digital VAX computers, UNIX systems and other Ethernet hosts can take advantage of AppleTalk resources, too.

The GatorBox is powerful, with a 10 megahertz 68000 processor and a full megabyte of memory. And it's highly reliable, backed by our full one-year hardware warranty.

ONE YEAR HARDWARE WARRANTY

Comparison of AppleTalk Gateways

Features	Cayman GatorBox®	Kinetics FastPath®	Shiva EtherGate™
LocalTalk-Ethernet gateway	■	■	■
Performs AppleTalk routing	■	■	■
Supports TCP/IP	■	■	
Runs software for Mac-to-UNIX file sharing	■		
Supports AppleShare for VMS and UNIX	■	■	■
Supports remote login to UNIX from Macs	■	■	
Compatible with GatorMail	■	■	
CPU speed (68000 processor)	10 MHz	8 MHz	10 MHz
Memory (RAM)	1MB DRAM	256K SRAM	192K DRAM
Warranty period	1 year	90 days	1 year
Retail price	$2795	$2795	$2395

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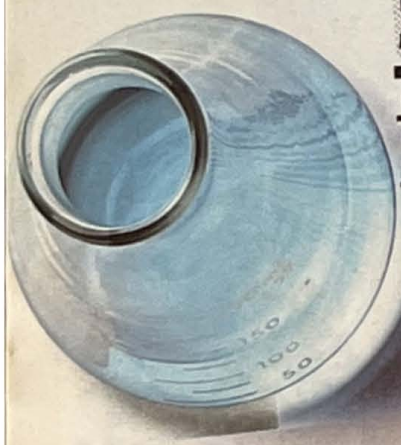
Some think there's no a Microsoft applications. T the same thing abo



Nobell Chem Revenue Potential

Product Portfolio Breakout

High Growth Markets	*1989*	*1990*	*1991*	*1992*
Medical Applications	15	25	40	60
Industrial Applications	30	39	46	51
Total	*45*	*64*	*86*	*111*
% of total	*55%*	*63%*	*68%*	*72%*
Mature Markets				
Defense Applications	36	38	40	42
% of total	*45%*	*37%*	*32%*	*28%*
Total Revenue	*81*	*102*	*126*	*153*

Nobell Chem

Report to the Board of Trustees

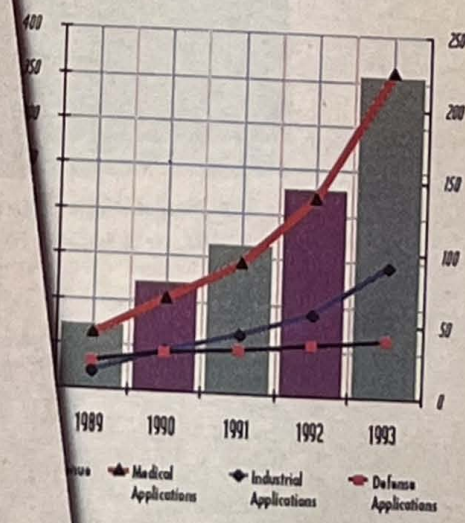
During the past twelve months, the Nobell Chem Corporation pulled far ahead of the competition, through the diverse and strategic marketing of its Nitro Glycerin compound.

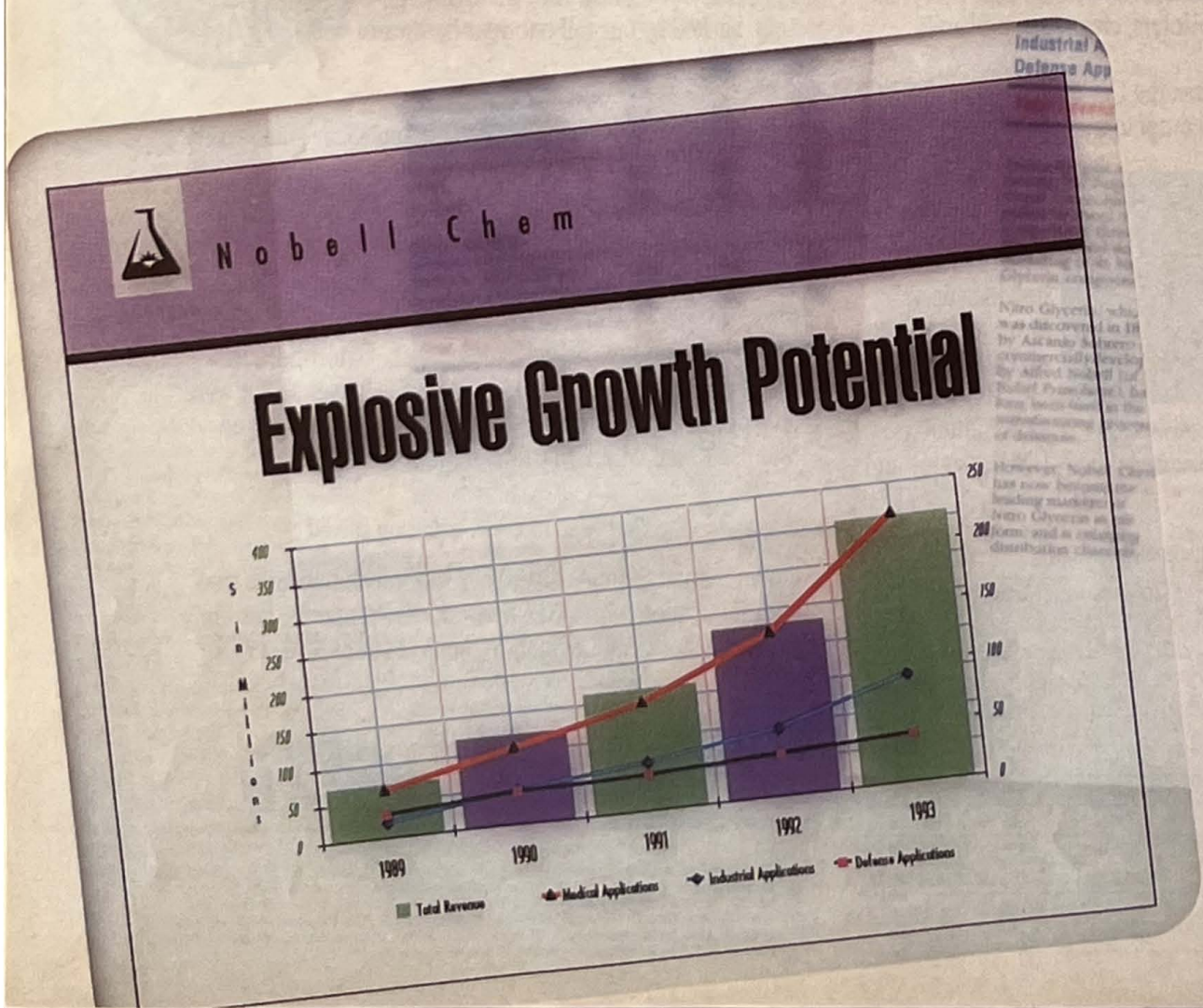
Nitro Gly…hich was discovered in 1847 by Ascanio Sobrero and commercially developed by …l Prize fame), has long been used in the manufacturing process of dynamite.

…now become a leading marketer of Nitro Glycerin in pill form, to aid …l uses. As a result of this development, Nobell Chem is now expanding …istribution channels.

1989	*1990*	*1991*	*1992*	*1993*
15	25	40	60	85
30	39	46	51	72
36	38	40	42	44
81	*102*	*126*	*153*	*201*

Explosive Growth Potential





dvantage to combining hen again, some thought ut nitro and glycerin.

If you own a Mac® you may already know what a phenomenally powerful piece of software Microsoft® Word is.

And, most likely, you're also aware of how powerful Microsoft Excel is. Well here's something you probably don't know:

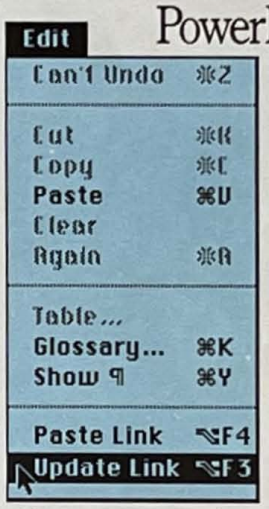
When Word and Microsoft Excel are combined, they're even *more* powerful. In fact, they're nothing short of explosive. Pun intended.

Because together Word and Microsoft Excel allow you to exploit the Macintosh®'s operating system in a way that has never been possible before.

We call this unprecedented feature "warm links." But you'll be more inclined to call it the best thing for revising documents since white out.

Here's how warm links works. Imagine it's the end of the day and tomorrow's the BIG presentation. You've been working with the sales manager to incorporate his Microsoft Excel projections into your report. You're finally done. But wait. Suddenly he makes one of his famous last-minute changes to the spreadsheet.

This is where warm links saves the day (or the hour). No more antiquated manual moves of opening and closing your document, cutting, pasting and praying. With warm links, you simply open your Word document and select Update Link. Word automatically finds the latest Excel data and updates your report. It's as simple as it sounds.



After you update your data in Microsoft Excel, select "update link" from Word's edit menu, and the change will automatically appear elsewhere.

Of course, because we are talking about the BIG presentation here, you'll want to go the extra step and blow them away. Enter Microsoft PowerPoint®. It's the easiest way to create attention-getting overheads and slides in black and white or color. Just cut and paste data from Word or Microsoft Excel into your presentation, draw, color, shadow, and take a bow.

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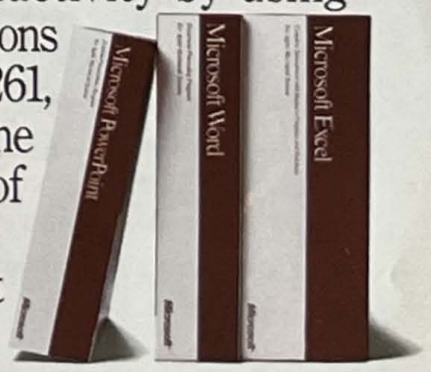

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Comparison

From Page 42

functions. Formulas are built in correct algebraic notation rather than the typical linear form of most programs.

Data Desk 3. Data Desk borrows the Macintosh desktop metaphor for its interface. Data resides in folders, and variables are represented by icons within those folders. Data Desk even has its own trash can, and icons change shading if they are open or selected. All of this takes some getting used to. What works well on the Macintosh desktop doesn't necessarily strengthen an application interface.

Data Desk's desktop does allow it to keep a lot of information just a mouse click away. For the novice, it's a matter of finding what you want among the clutter, while for the experienced user it's full of thoughtful shortcuts and extra power.

For instance, in JMP you can keep multiple windows open, but if you close one, it's gone. Information can be saved in the journal, but that presents a static picture of the results and cannot be updated.

When Data Desk executes a command it opens a window that can be closed and saved in the Results folder as an icon. You can end up with lots of icons, but you also have an audit trail of your explorations. When a result is no longer useful, it can be thrown in the trash. All Data Desk plots can be updated manually or automatically. JMP platforms have to be rerun.

The design of Data Desk has been refined over the years. Scatter plots open to a size that is revealing without taking up excessive screen space. JMP's displays open to a size that uses most of the screen but doesn't display all the information.

Data Desk's HyperViews facility has also been expanded in Version 3. HyperViews are commands imbedded in the display windows. When you sweep across a "hot spot," the pointer becomes a hand. Clicking on a hot spot pops up a menu of suggested further explorations. Pointing to a variable name in a statistics window might suggest a histogram or probabilities plot.

Performance and results. The first version of Data Desk was slow. With Version 3, it addresses the Mac's built-in numeric coprocessor directly, if present, and claims speed improvements of up to 500 percent.

Odesta boasts that Data Desk 3 is the fastest statistical package for the Mac. We didn't test it against the field, but its displays are brisk. JMP can't really be tested for pure calculation speed, since it always performs multiple calculations and plots, but it too is a responsive program. Unless you are working

See Comparison, Page 48

In summary: Statistics

JMP and Data Desk 3, two new Exploratory Data Analysis tools from SAS Institute and Odesta Corp., respectively, are both excellent, powerful packages. JMP is SAS Institute's first foray into the Mac market, and it has done it the right way, designing a package from scratch that does the Mac interface proud. Data Desk 3, on the other hand, is the latest upgrade of a venerable Mac program, and this version reflects that maturity with a host of finely tuned features.

The products are in the same price range, $595 for Data Desk and $695 for JMP, and both companies have education and volume-discount pricing schemes, so most buyers will base their decision on features.

JMP is easier to use. It automatically determines what analyses are appropriate for a given type of data and runs just six different suites of tests. Each suite can then be extended for further exploration, and different sets of results can be saved in a Journal.

Data Desk provides much more flexibility in choosing analyses but is also much more complex. One advantage of not using the suite-testing approach is that analyses do not have to be completely rerun if you change a data point. Data Desk's superbly written manuals also compensate for the program's more complicated interface.

JMP seems best for those who don't need all of Data Desk's power and want a more streamlined, easy-to-use product. SAS also plans a series of modules with more traditional statistics capabilities, which may enhance JMP's attractiveness. Data Desk 3 seems best for heavy-duty use by scientists and business users with sophisticated needs. The latest version is an admirable upgrade of an already powerful program's capabilities and features.

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Comparison

From Page 46

with very large data sets, you will not get impatient with either program.

Both programs can import any delimited text file, and both can export text files. Data Desk can read Double Helix collections directly, while JMP can read SAS transport files. You also can type data directly into the JMP data table or Data Desk variable arrays.

It's difficult to evaluate the range of statistical capabilities within each program because the needs of users vary so greatly (see table, Page 49). JMP has completely implemented linear models, and Data Desk has added GLM capabilities — multiple linear regression, correlation and analysis of variance and covariance.

Both programs have good general statistical and exploratory tools, as far as they go, but in both cases Data Desk goes further.

Data Desk's documentation also comes out ahead of JMP's. It consists of four excellent volumes to JMP's one. JMP's short manual has rather trivial examples that make the program appear to be less powerful than it really is.

Conclusions. Even though Data Desk 3 and JMP have some similar features and capabilities, they are not easily comparable programs. Instead of being based on

See Comparison, next page

Exploratory Data Analysis

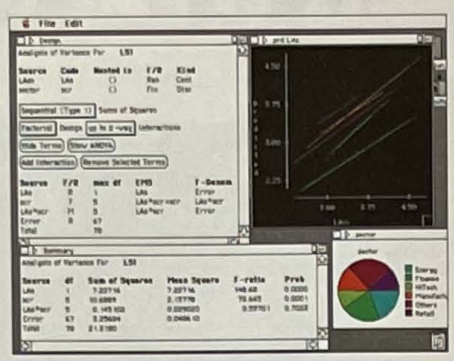
Most statistical analyses are performed by first formulating a hypothesis and then testing the data to confirm or negate that presupposition. This method is fine for experiments designed with a hypothesis in mind, but with the vast majority of analysis done on existing data, it can lead to a lot of trial-and-error work. Professor John Tukey of Princeton University and AT&T Bell Labs of Morristown, N.J., developed Exploratory Data Analysis (EDA) to avoid this blind-alley approach.

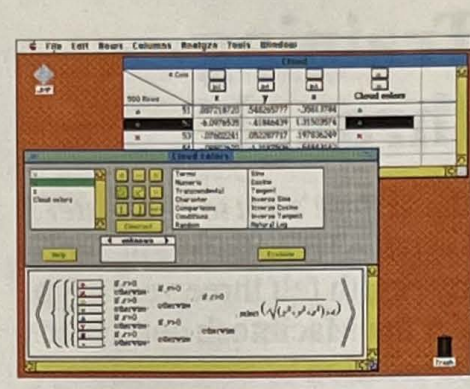
The point of EDA is that real-world data should be explored for clues that lead you to the correct conclusions. This entails looking at data in new ways — not as lists of numbers but as the graphical embodiment of the trends and relationships the data represent.

Paul Velleman, who is a professor at Cornell University, a disciple of Tukey's and the developer of Data Desk, maintains that EDA is a well-defined term and not a general concept open to interpretation. He lists these necessary capabilities for a complete EDA package:

- Integration: The threads of investigation should be able to follow any path at any time.
- Point of view: Data is most revealing when it can be viewed from all possible angles.
- Comparison: One "what if" analysis presupposes another. You must be able to compare analyses side by side.
- Pipes: The results of one analysis must be available for input to the next.
- Real-time graphics: Immediate interaction and the illusion of instantaneous response time make EDA possible.

In addition to the diagnostic plots and statistics of conventional packages, EDA programs include dynamic tools. The graphics rotate and slide to reveal patterns that wouldn't otherwise be apparent. There are pointers, brushes and grabbers to locate and identify outliers and remove or correct them. — *By Clay Andres*

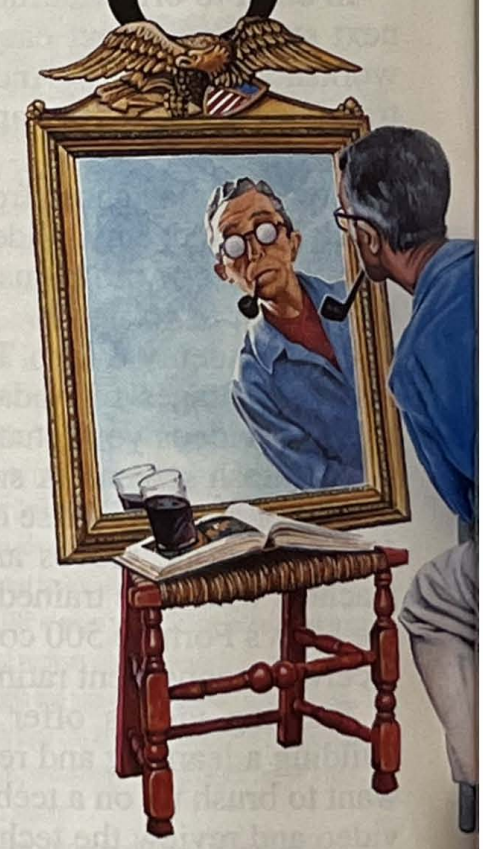




Data Desk's General Linear Model window allows you to design your experiment graphically. It is dynamically linked to the standard ANOVA table window shown here, far left.

JMP can compute values for columns in its Calculator window (near left). Formulas are input in normal algebraic form and shown in typeset form in the display area.

Things



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Comparison

From previous page

formal theory, JMP's approach is based on practicality.

JMP is powerful and easy to use. The programmers' delight in writing JMP is evident throughout and makes the program intuitive and a pleasure to use. Data Desk has been selling ease of use as one of its main features, but it is daunting when compared with JMP.

JMP has its weaknesses. Its use of multiple plots and tests in one window is coherent but clumsy; there is too much scrolling and no control of the placement of items. But for a first Macintosh program from a large company with a completely un-Mac-ish product history, it is an impressive feat. SAS plans specialized modules as future options, which should greatly enhance the product.

Data Desk 3 is a mature program that continues to improve and remains innovative. Using an operating system interface for an application takes getting used to, but this program is clearly meant to be used by people who are serious about numbers.

It takes longer to navigate through Data Desk's menus than through JMP's simple structure, but while JMP makes most of the choices for you, Data Desk has many options.

At $695, JMP costs $100 more than Data Desk. For some, JMP's extreme ease of use will make it worth the price. But in general, if you are a full-time explorer, Data Desk should be your constant companion. For an occasional outing with the neighborhood penguins, JMP is good company. □

Features at a glance

	JMP	Data Desk
Price	$695	$595
Statistics		
Summary statistics	●	●
Contingency tables	●	●
Tests and confidence intervals	●	●
Correlation	●	●
Non-parametrics		●
Regression	●	●
Logistic regression	●	
Linear model	●	●
ANOVA	●	●
MANOVA		●
Cluster analysis		●
Principal component analysis	●	●
Transformations	●	●
Plots		
Histograms	●	●
Boxplots	●	●
Dotplots		●
Pie charts		●
Bar charts	●	●
Scatterplots	●	●
Scatterplot matrices	●	●
Lineplots	●	●
Multiple lineplots	●	●
Rotating plots	●	●
Rotating surface plots	●	●
Means circles	●	
Leverage plots for linear models	●	
Mahalanobis distance plots	●	

Product Info

Ashton-Tate Corp.
Full Impact 1.1: $395
(213) 329-8000

DeltaPoint Inc.
Trapeze 2.1: $295
(408) 648-4000;
(800) 873-0008

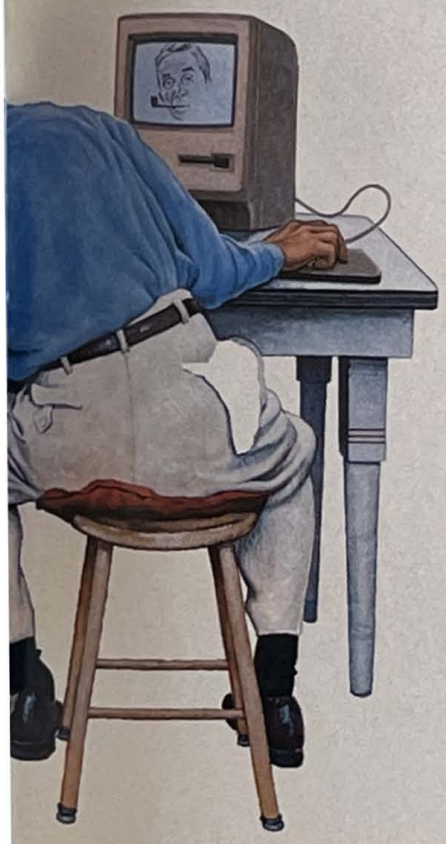
Informix Software Inc.
Wingz 1.1: $399
(913) 599-7100

Microsoft Corp.
Excel 2.2: $395
(206) 882-8080

Odesta Corp.
Data Desk 3: $595
(312) 498-5615

SAS Institute
JMP: $695
(919) 467-8000

Change.



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REVIEWS

A Serius attempt at desktop programming

Serius89 1.2

Serius Corp.
List price: $295 for Serius89 Programmer; $495 for Serius89 Developer; site licensing available

+ Innovative graphical development environment approachable by non-programmers; compiles double-clickable, stand-alone applications; good use of Macintosh interface.

− Limited functionality; offers no interactive debugging, requiring frequent recompilation; manuals are not friendly enough for beginners; no Undo command.

By Dennis Klatzkin

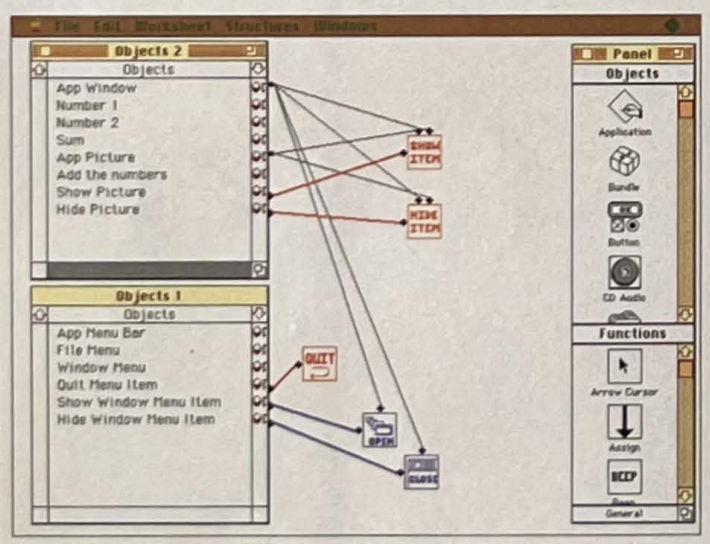
Like the search for the Fountain of Youth, the quest for an ideal Mac programming system goes on. It must be intuitive, graphical and embody basic Macintosh interface precepts. It should compile instructions into stand-alone, double-clickable applications of reasonable size and practical speed. And it should be an object-oriented programming system (OOPS) — one that is approachable by non-technical types.

The latest contender for this as-yet-unclaimed crown is Serius Corp.'s Serius89 1.2, and it's a serious candidate indeed, fulfilling many of the above requirements. But Serius89 is also plagued by some of the ills common to new, non-traditional development systems. The result is a product offering more promise than functionality at this time.

OOPS, your slip is showing! Serius89 borrows heavily from the nomenclature of classic OOP languages like SmallTalk in addition to the standard Mac fare such as icons and menus. Its objects, functions, links and signals suggest real OOPS credentials, but in fact, Serius89 does not quite qualify in that regard — it offers no true inheritance, encapsulation or classes, all OOPS hallmarks.

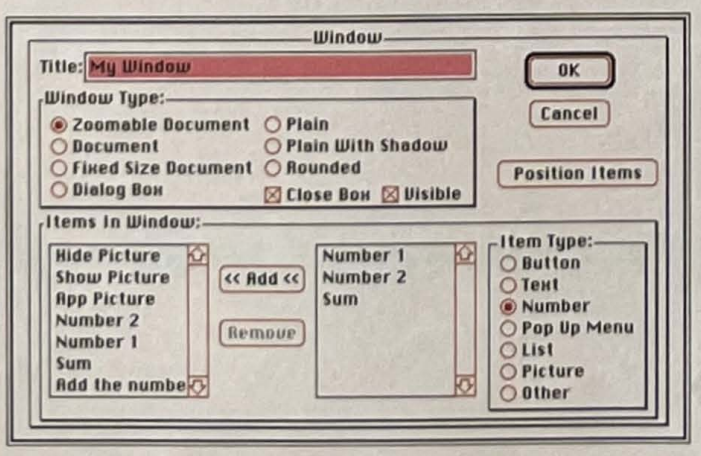
Rather, Serius89 is an innovative hybrid for building applications based on graphically represented objects and functions created with an underlying programming technology called Object Interaction Protocol (OIP). If OIP can be regarded as the "language," then Serius89 is the environment

See Serius89, Page 56



Objects dragged from the Panel into object windows are linked to functions on the Workbench by flow links (shown above with colored lines) and parameter links (black lines).

Double-clicking on Serius89 objects brings up dialogs (right) for tailoring many of the controls that are part of a standard Mac user interface.



Reviews in Brief: RENDEZVOUS • GOFER 2.0

Rendezvous

Hearty congratulations to PMC Telesystems Inc. for discarding copy protection with the release of Version 2.5 of Rendezvous, the company's electronic appointment diary system.

Rendezvous aspires to be the complete electronic appointment management system, and its list of features is impressive. Some aspects of the program simulate traditional printed appointment books. Calendars can be viewed in either a 12-month calendar format or a 52-week spreadsheet format; extensive notes and to-do lists can be attached to daily diaries.

Additional features take advantage of the power of the Mac. The Automatic Reminder System displays appointments on screen at user-specified times, even when other applications are running. A particularly powerful feature is the ability to search for a specific appointment either forward or backward in time. Several report options are supported, and PMC Telesystems includes a padded three-ring binder and 12 tabbed dividers.

Because of several user interface design decisions, you may spend more time learning Rendezvous than you had planned. Switching between the 12-month view and the 52-week view, for example, sometimes requires selecting two successive commands from the same menu. The documentation is not clearly written.

Although the utility would be greatly enhanced if it were a desk accessory rather than an application, its suggested MultiFinder partition is only a slim 128 Kbytes.

While we would not want to be responsible for training a temporary secretary to maintain Rendezvous in a busy professional office, users willing to accommodate the program's peculiarities will have access to a feature-laden appointment management system.

PMC Telesystems Inc. can be reached at P.O. Box 5127, Vancouver, British Columbia, Canada V6B 4A9; (604) 255-9949. — *By Dale Coleman*

GOfer 2.0

Many Macintosh utilities will help you find a misplaced file that's buried somewhere on your hard disk, based upon all or part of its name. But few can actually search by delving into the contents of documents. Microlytics Inc.'s GOfer desk accessory is the handiest product in this group, and Version 2.0 improves upon some already useful features (see MacWEEK, Nov. 8, 1988).

See Reviews in Brief, Page 58

HyperTMON squashes HyperTalk bugs

ICOM's debugger is interactive

HyperTMON

ICOM Simulations Inc.
List price: $99.95

+ Adds full-featured interactive debugging capabilities to HyperTalk, including the ability to monitor variables, evaluate expressions and set watch points.

− Numerous windows will make it difficult for users of Macs with small screens; slowed script execution when debugger is running; does not work with SuperCard or Plus.

By Steve Michel

On the positive side, HyperTalk is a language that is very easy to use. Creating simple scripts for such tasks as stack navigation is simple. On the negative side, HyperTalk has never been much help when you need to find out why your scripts are not working properly — and as scripts get larger and more complex, the sleuthing process gets more difficult. Most developers have resorted to using the Put command to display variables in the message box during development; other arcane methods of monitoring execution have also been used, but nothing can take the place of a good debugger.

Now an interactive HyperCard debugger is finally available. ICOM Simulations Inc. is banking on its solid reputation as the developer of the well-regarded TMON assembly language debugger in releasing HyperTMON for HyperTalk.

Using HyperTMON. HyperTMON can be installed into your Home stack or into HyperCard itself. Once installed, it is invoked by the command HyperTMON either in a script or in the message box. The debugger then displays two menus. The first menu, HyperTMON, is used to control script execution. The second menu, Display, allows you to control which scripts you are debugging. When it is activated, it displays the names of all buttons and fields on the current card and background. The scripts from the card itself, its background, the current stack and the Home stack also are available for debugging.

You debug a script by opening it from the Display menu. When a script is opened, the same script-editing tools that are in HyperCard are available, along with some new features, including search and replace. Cutting, copying and pasting can be done from HyperCard's Edit menu, and Undo (a much appreciated feature) is also available.

Once a script is open, you can watch the script execute by using HyperTMON's Trace command. As the script is executed, a greater-than symbol (>) appears to the left of the current line, and the Edit window scrolls as needed to display different parts of the script. You also can execute scripts one line at a time with the Step command.

If tracing scripts one line at a time were all HyperTMON could do, it would be a useful tool but still not a lot of help in debugging. The real power of the debugger lies in HyperTMON's Expression window. As you proceed through or trace the execution of a script, the values of any desired variables can be displayed in the Expression window. You also can enter HyperTalk expressions (such as "the heapspace," which displays the amount of unused RAM available to HyperCard) and the values returned by these expressions will be updated continuously as the script executes.

Setting break points. HyperTMON gives you two mechanisms for conditionally halting the execution of a script while you are tracing it. The first is the Watchpoint mechanism in the Expressions window. You can enter expressions that do such things as test certain variables. HyperTMON evaluates the expression after executing each line of a script. If it evaluates any of the Watchpoint expressions as

See HyperTMON, Page 54

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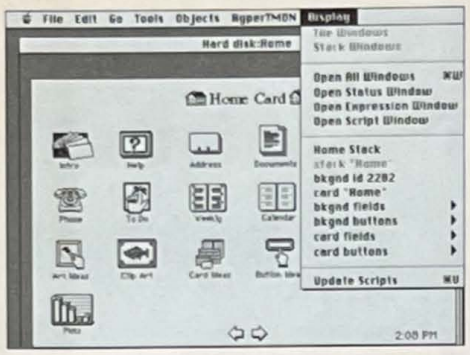
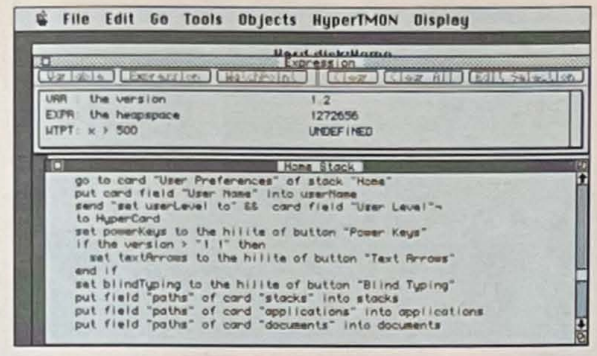
HyperTMON's Display menu (near right) lets you access scripts of all current objects.

HyperTMON's Expression window (far right) lets you monitor the status of certain variables and evaluate HyperTalk expressions.




File Edit Go Tools Objects HyperTMON Display
Expression
VAR: the version 1.2
EXPR: the heapspace 1272656
WTPT: x > 500 UNDEFINED
Home Stack
go to card "User Preferences" of stack "Home"
put card field "User Name" into userName
send "set userLevel to" && card field "User Level"
to HyperCard
set powerKeys to the hilite of button "Power Keys"
if the version > "1.1" then
set textArrows to the hilite of button "Text Arrows"
end if
set blindTyping to the hilite of button "Blind Typing"
put field "paths" of card "stacks" into stacks
put field "paths" of card "applications" into applications
put field "paths" of card "documents" into documents

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HyperTMON

From Page 52

"true," it halts the tracing of the script. You also can include the Break command in a script, which causes HyperTMON to unconditionally halt execution at that point. These two features are very handy when debugging. After HyperTMON stops at a break point, all variables in the handler retain their values, and you can enter expressions to test different values while examining the code to see where things are going wrong.

One problem with the Break command is that it is not a HyperTalk command or an external; it is part of HyperTMON. You will get the familiar "can't understand" error if HyperTalk encounters the command when you are not using HyperTMON. We would have preferred that this command triggered activation of HyperTMON. Since tracing scripts with HyperTMON takes about seven times as long as executing them in HyperTalk, we wish there were ways to trigger the debugger automatically while executing a script normally.

On the other hand, you can select part of a script in a HyperTMON edit window and execute only that portion. HyperTMON also includes an option to automatically comment the Break command so that HyperCard will ignore it.

HyperTMON allows tracing of more than just mouseUp handlers and the like. You can trace selected portions of scripts. For example, if you are tracing a function that requires parameters, HyperTMON will stop and present you with a message box that requests values for those parameters. This feature is very useful; it means again that you don't have to trace all of a complicated script.

Some problems. We've had few problems with HyperTMON, although we have had some crashes. These seemed to be caused by not having enough memory, and we recommend that you allocate more than 1 Mbyte of RAM for HyperCard with HyperTMON. Additionally, HyperTMON is a little unpredictable in its use of the Set, Pass and Send commands. Dialog boxes also indicate problems with the Params function. However, even when you have such problems, HyperTMON can continue to trace a script, so most users won't have any problems.

A more serious problem presents itself to users of Macintosh Plus and SE computers. It is likely that you will have a large number of windows open on the screen when using HyperTMON, since the program lets you resize windows, and script windows scroll automatically when tracing. Users of Macintoshes with small screens will find that the HyperTMON windows often completely cover HyperCard on the screen. Normally, this won't be much of a problem, but it can be a nuisance, especially if you are debugging a script that draws on a card. The Tile and Stack Window commands are a big help in combatting screen clutter.

Conclusions. HyperTMON is a superb and much-needed product. It gives HyperTalk programmers, for the first time, a full-featured debugger. After using the product for just a few weeks we wondered how we lived without it, and we wholeheartedly recommend it for every serious HyperTalk programmer.

ICOM Simulations Inc. is located at 648 S. Wheeling Road, Wheeling, Ill. 60090; (708) 520-4440. □

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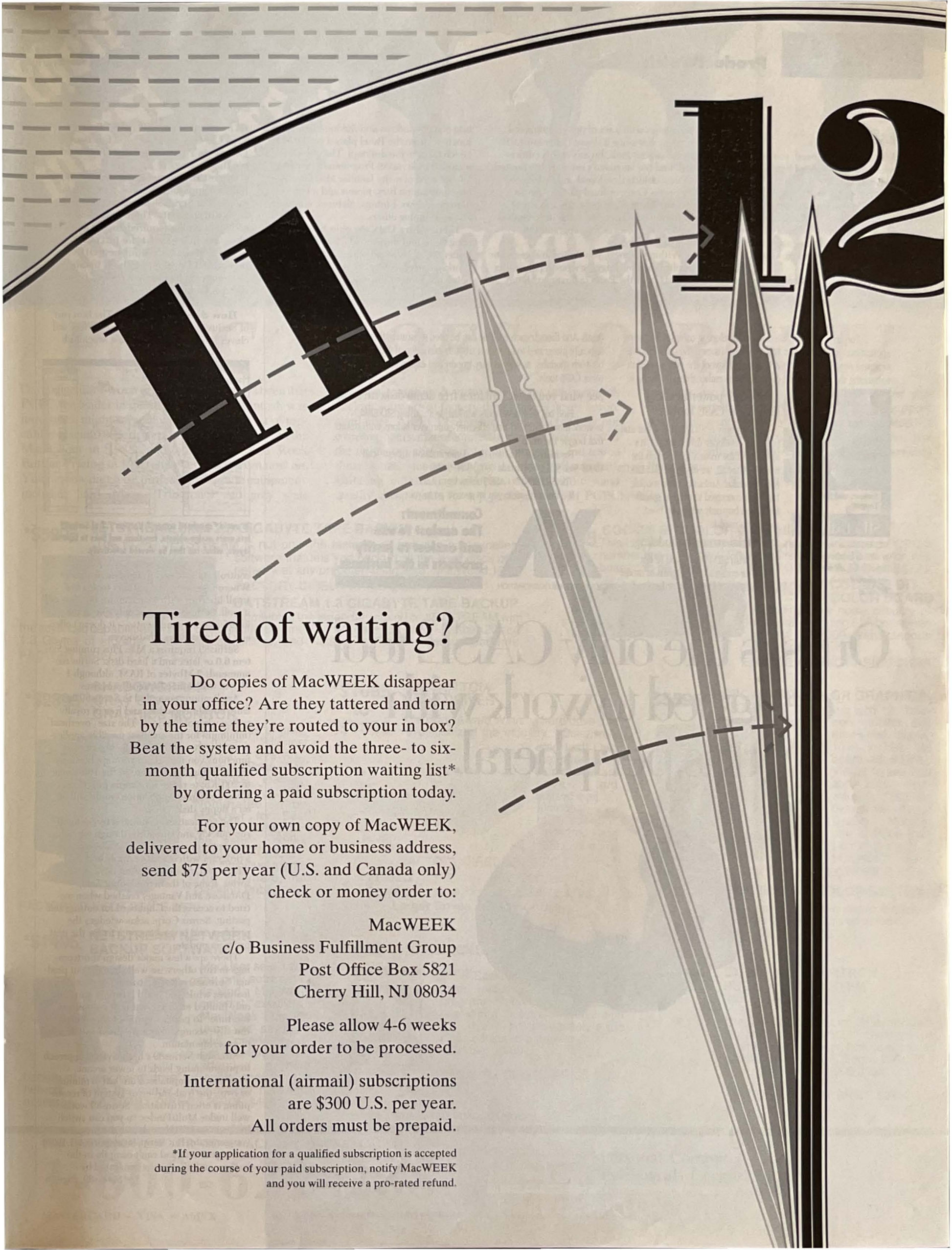

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Serius89

From Page 52

in which OIP is employed, somewhat like the relationship between HyperTalk and HyperCard.

To program new OIP structures, you have to purchase the more extensive Serius89 Developer package. And you must have a rather advanced knowledge of one of the traditional programming languages such as C, Pascal or assembly language, as well as the Macintosh Toolbox.

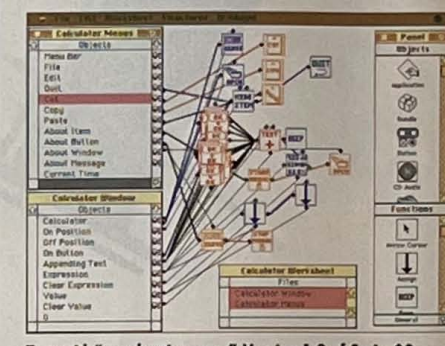
The smaller Serius89 Programmer package comes with a set of pre-programmed objects. But since it doesn't offer any OIP development tools, buyers of this edition will find the language's extensibility limited to new objects developed and distributed by Serius Corp. or third parties. (Serius has already brought out quite a few new or improved objects since the introduction of Version 1.0, all as free upgrades for registered users.)

Within Serius89, you design and generate applications by dragging icons representing objects from the Panel (a floating palette) into object windows and linking them to functions from the Panel placed on the Workbench (akin to the desktop). The objects included in Serius89 Programmer provide for and control many familiar Mac interface elements: menu bars, menus and menu items, windows, buttons, pictures, numbers, and text, among others.

There's also a Database object for organizing fields and records, a CD Audio controller object, a Sound object and even a Workstation object for accessing AppleTalk networks. Most of the objects have associated functions, such as Play CD Track or Stop CD Play. Some general functions like Cut, Copy, Paste, Assign and Quit round out the offerings.

Almost all the operations you perform to build an application can be done with the mouse, but Serius89 also incorporates ample keyboard shortcuts. There really isn't any coding or typing required, except for naming objects or filling in data for text or numeric entities. Of course, writing new OIP objects in Serius89 Developer calls for traditional programming techniques: coding, typing and abstract syntax.

How does it stack up? The best part of Serius89 is its smooth user interface and clever integration of standard Macintosh controls into a development environment. Where necessary, the authors took a few small liberties with Mac canons, but they did it well. Serius89 violates only one of the interface commandments — it doesn't offer any Undo features whatsoever.



To avoid "spaghetti screen," Version 1.2 of Serius89 lets users assign objects, functions and links to separate layers, which can then be viewed selectively.

Serius89 requires a Mac Plus running System 6.0 or later and a hard disk. Serius recommends 2 Mbytes of RAM, although 1 Mbyte will suffice for most purposes.

Applications compiled in Serius89 are truly double-clickable, and free of royalty or licensing obligations. The size "overhead" (minimum for the smallest possible application) is quite small. With the objects and functions you include in your applications, the resulting file sizes are in the 100-Kbyte to 200-Kbyte range for simple programs. Even a complex application would still fit on a floppy disk.

The applications generated by Serius89 run quickly and smoothly, though we did encounter one severe bug. When we built a program with standard Apple and Edit menus and opened different desk accessories, some of them (including Acta, DAtabase and Vantage) crashed when we tried to access the Clipboard for cutting and pasting. Serius Corp. acknowledges the problem and is working on a fix for the next program update.

There are a few major design shortcomings in this otherwise well-thought-out product. Serius89 offers no tracing or debugging features while you build an application and only limited error reporting at compile or run time. To perfect a project, you must continually recompile your program and do a lot of experimentation.

Although Serius89's highly visual approach to programming leads to fewer arcane errors, and compilations are fast (a minute or two), the trial-and-error system of recompiling is often frustrating. Serius89 works well under MultiFinder, so you can switch between its Workbench and the programs you generate. But Serius89 requires a 1,195-Kbyte partition and can't compile in the background. (Programs generated by

See Serius89, Page 58

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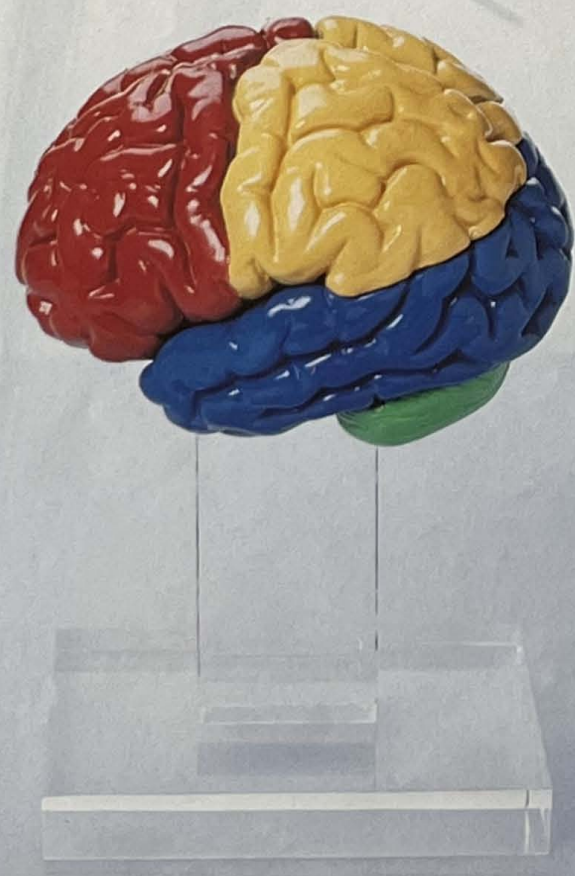

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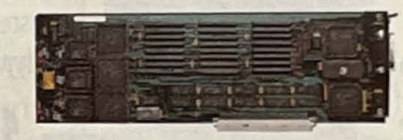

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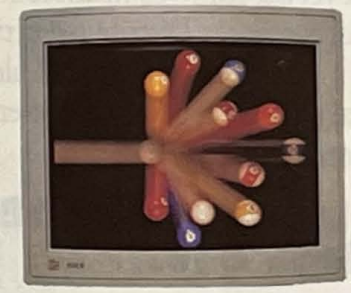

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Reviews in Brief

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GOfer 2.0 is faster than the original by up to 50 percent. It supports "wild card" searches and can recognize more document formats than the previous version, including Microsoft Word 4.0 and Works 2.0, Claris' MacWrite II, and Ashton-Tate's FullWrite. The crowded and less than intuitive interface of the earlier model has been substantially improved.

The single best new feature in GOfer 2.0 is its ability to save and recall multiple "search sets" — predefined criteria for how and where to look for text. You can add particular files, file types and folders to a set, and even specify what file types to exclude from a search.

The ease with which you can now configure GOfer and initiate a search transforms your jumble of files and folders into a useful, if somewhat subdivided, database of information for reconnoitering and retrieving. But we wish Microlytics had improved its meager documentation as much as it did the desk accessory itself.

GOfer 2.0 retails for $79.95. If you purchased an earlier version before July 1, the upgrade cost is $25; if your purchase was made on or after that date, there's no cost. GOfer 2.0 is also bundled with CE Software's new DiskTop 4.0, and the price of $99.95 for these two outstanding utilities is a true bargain.

Microlytics Inc. is located at 2 Tobey Village Office Park, Pittsford, N.Y. 14534; (716) 248-9150; (800) 828-6293.

CE Software can be reached at P.O. Box 65580, West Des Moines, Iowa 50265; (515) 224-1995. — *By Dennis Klatzkin*

Take This Simple Network Test.

1. Which Network Doesn't Tie Up A Valuable Macintosh As A File Server?

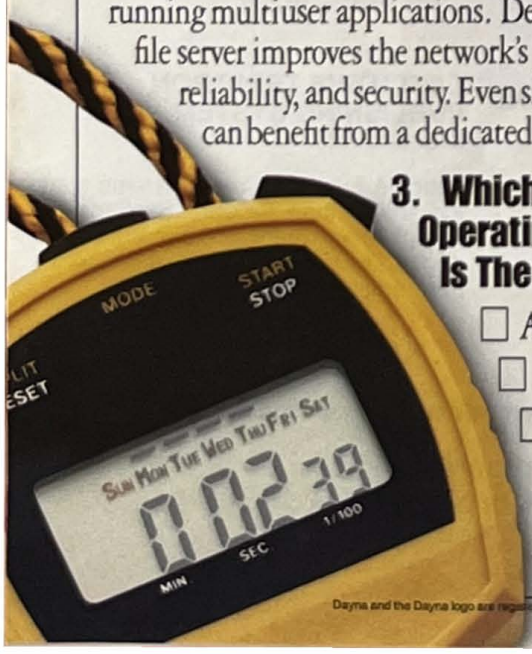
☐ AppleShare ☐ TOPS
☐ DaynaNET

Hint: AppleShare® requires a dedicated Macintosh® as a file server. DaynaNET™ runs on an inexpensive yet fast IBM® compatible 286 or 386 personal computer. Distributed networks such as TOPS® don't require a dedicated file server, but steal processing power from every Macintosh on the network.

2. Does A Real Network Need A Dedicated File Server Anyway?

☐ Yes ☐ No

Hint: A file server provides centralized storage and management of information and a basis for running multiuser applications. Dedicating the file server improves the network's performance, reliability, and security. Even small networks can benefit from a dedicated file server.



3. Which Network Operating System Is The Fastest?

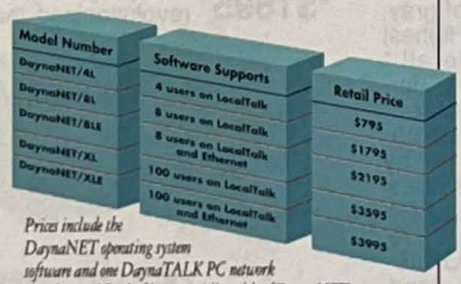
☐ AppleShare
☐ DaynaNET
☐ TOPS

Hint: Both TOPS and AppleShare run on top of the Macintosh or MS-DOS® operating system. This slows them down. The DaynaNET operating system directly controls the file server, taking full advantage of all its speed and processing power.

4. Which Network Will You Never Outgrow?

☐ AppleShare ☐ DaynaNET ☐ TOPS

Hint: You soon outgrow a distributed network such as TOPS, because its performance deteriorates as you add users. Adding to an AppleShare network requires additional costly Macintosh file servers, so you soon outgrow your budget. DaynaNET's generous upgrade program lets your network grow as you grow in affordable stages.



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Serius89

From Page 56

Serius89 are MultiFinder friendly and default to a 488-Kbyte partition.)

Perhaps the biggest drawback of all is the lack of overall functionality obtainable by non-programmers using the objects bundled with Serius89 Programmer. Version 1.2 is long on its support of Mac interface elements and controls, but short on utilitarian power. It's great to have tools at your disposal to create programs with pull-down menus and dialogs, but the programs should also be capable of performing a range of useful activities.

At present, Serius89 has no objects to support word processing, graphics creation, spreadsheet or file management functions, nor to access text files or other external file formats. It offers no access to the modem port and only rudimentary printer support. Serius Corp. has scheduled the release of new objects during the coming months to address most of these limitations.

Serius89 is a novel, fascinating approach to "desktop programming" and, despite its shortcomings, we believe it's an investment that will pay off.

Documentation and support. Documentation is often a weak link in development system packages, and Serius89 is no exception. What's more, with a non-standard program like this one, users can't turn to books, magazines or other outside resources for help. However, Serius Corp. provides unlimited technical support to users via its toll-free lines, and we found the support staff knowledgeable and responsive.

The hefty, loose-leaf-bound Serius manual contains an elementary tutorial that leads you through the creation of a rather pointless application, with a paucity of useful explanations in the process. The remaining reference materials are overly wordy and dense, with a lot of abstraction and too few practical tips and techniques.

The separate guide to Serius89's objects and functions is terse and also lacks the kind of "how-to" examples and hand-holding that beginners need. A program like Serius89, which makes technical features accessible to the non-technician, deserves friendlier documentation.

Conclusions. Serius89 is very much a "work in progress." At present, it's of only limited usefulness, as it lacks sufficient functionality to generate many types of sophisticated applications. But since the product's introduction a few months ago, Serius Corp. has demonstrated a commitment to bringing users timely, substantive upgrades at no cost.

The company's published schedule for the release of new Serius89 objects suggests that the program will soon offer enough functionality to make it a viable programming alternative for many Macintosh users. In the meantime, Serius89 is a novel, fascinating approach to "desktop programming" and, despite its shortcomings, we believe it's an investment that will pay dividends in the future.

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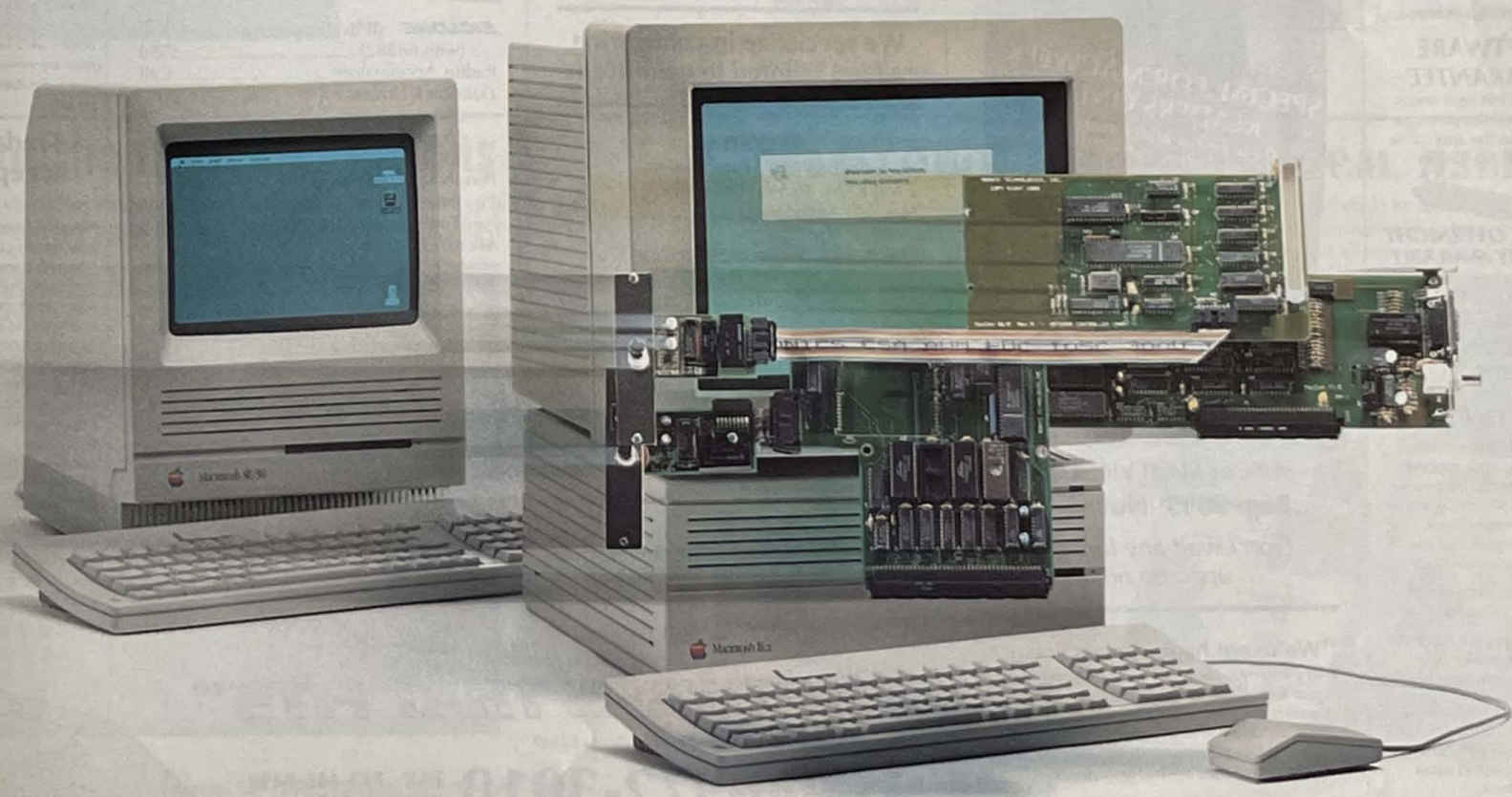

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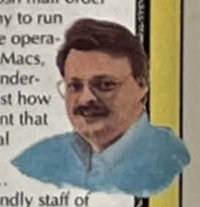

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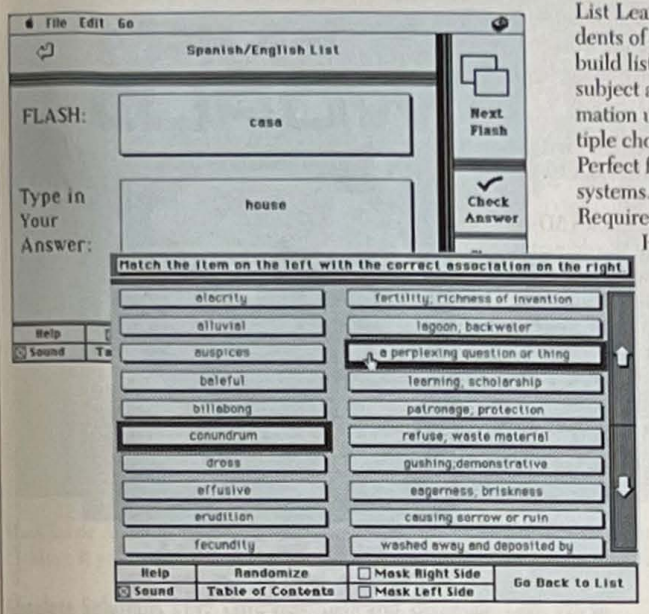

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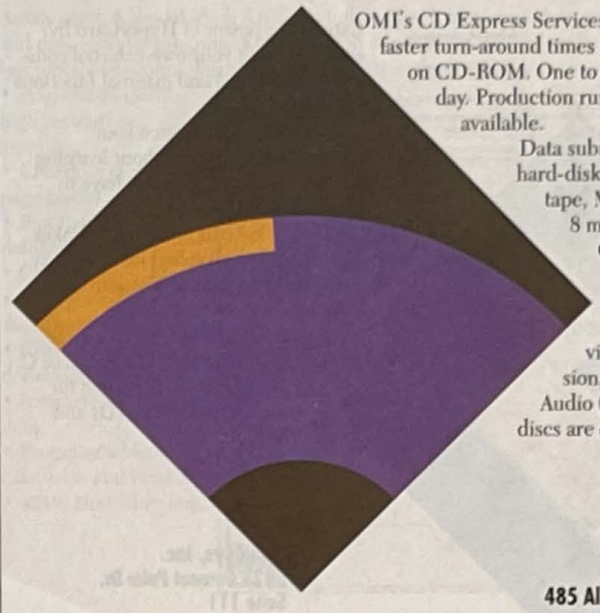

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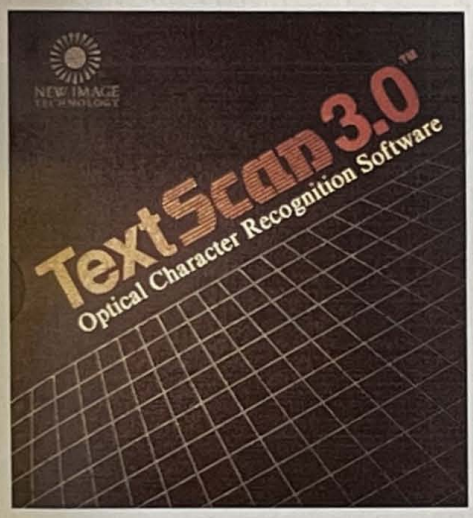

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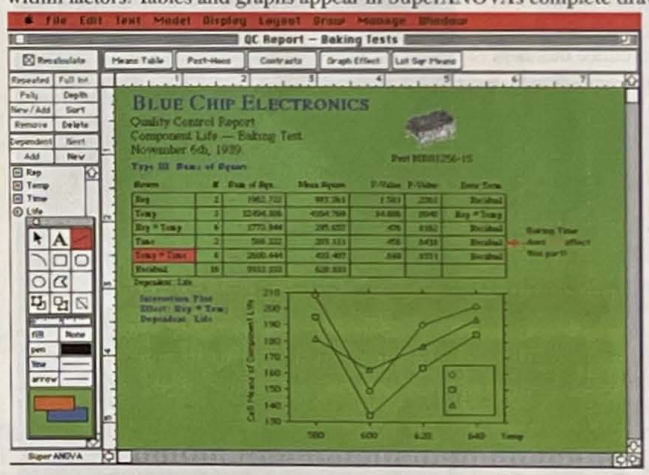

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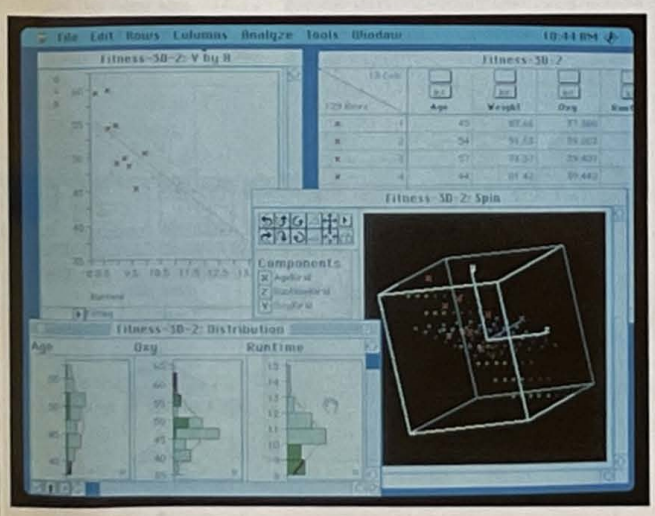

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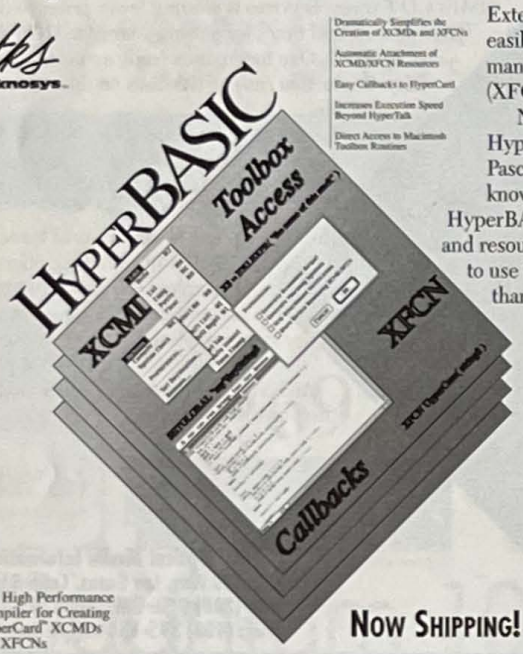

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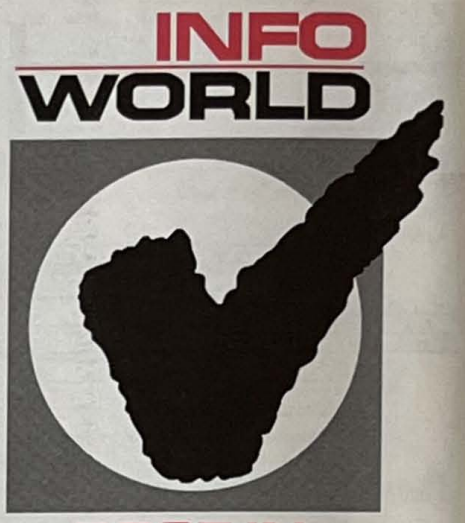

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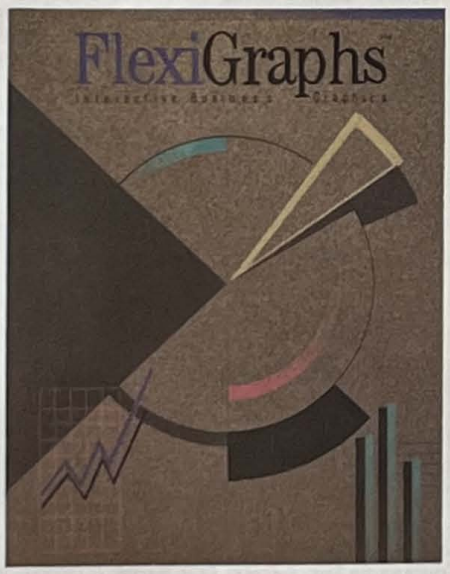

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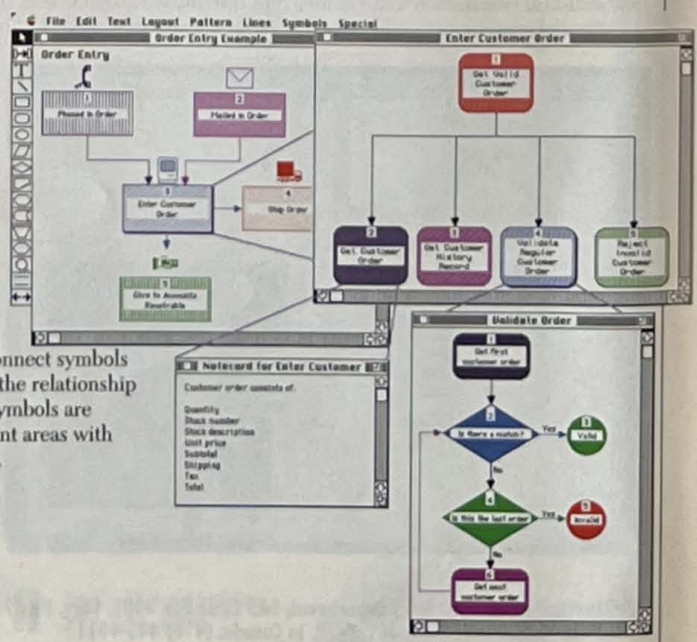

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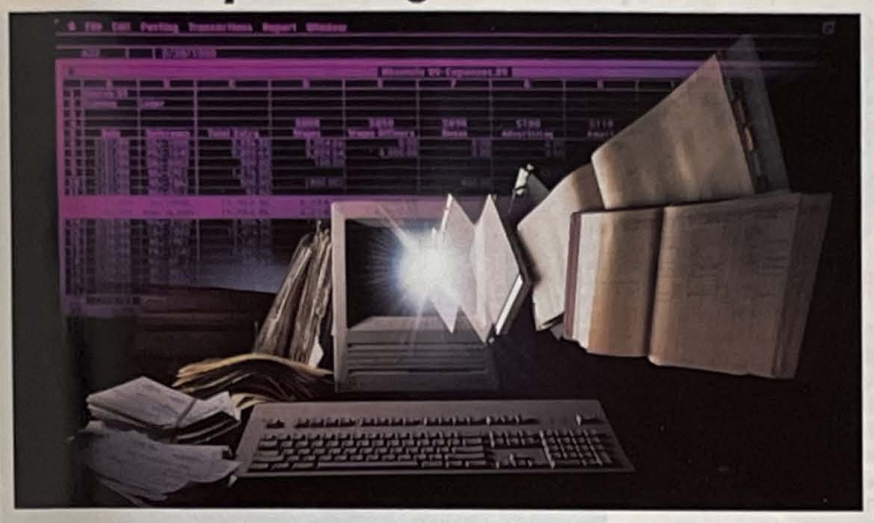

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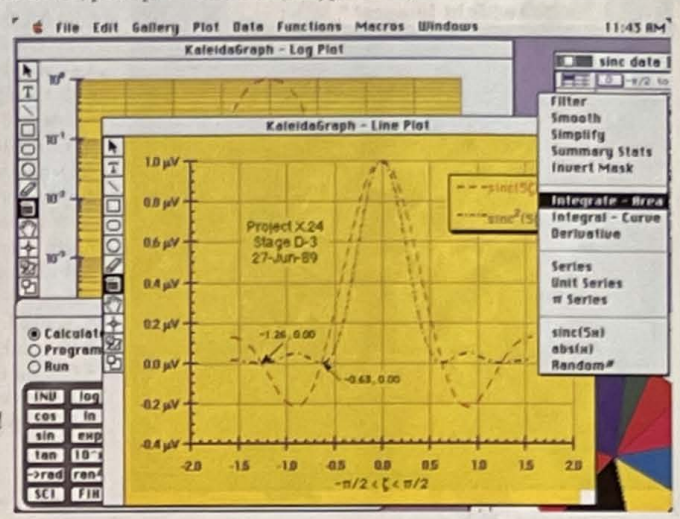

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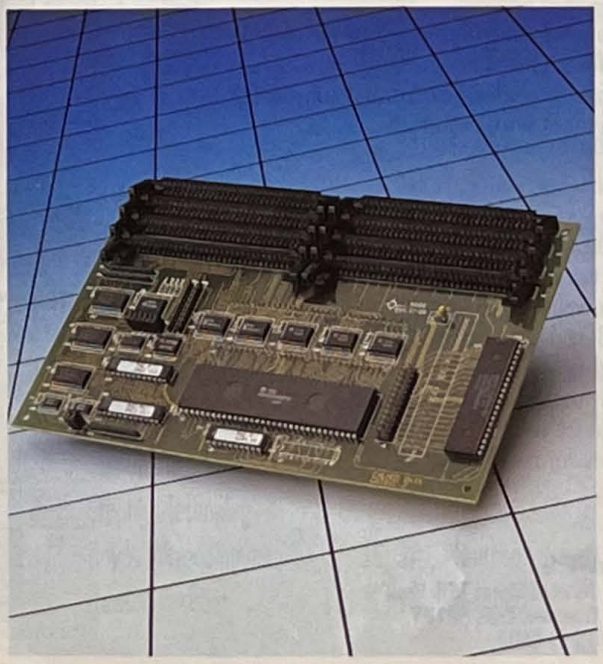

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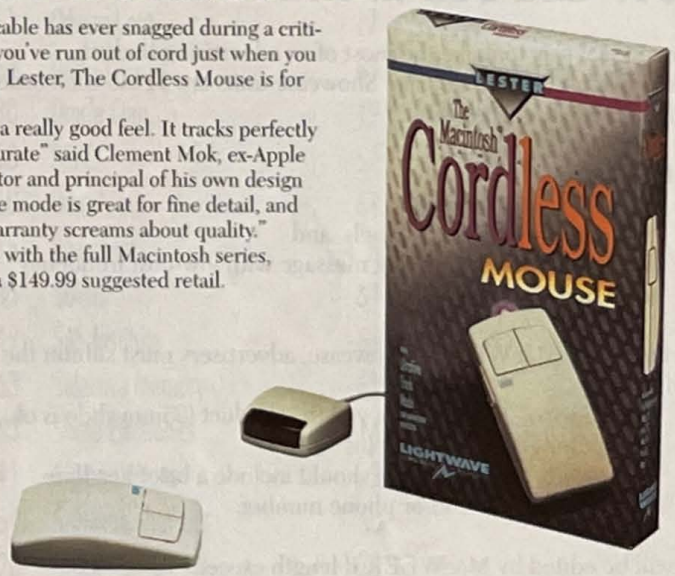

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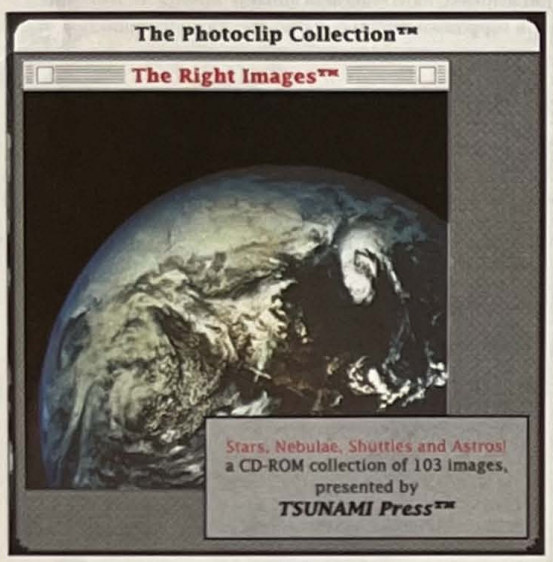

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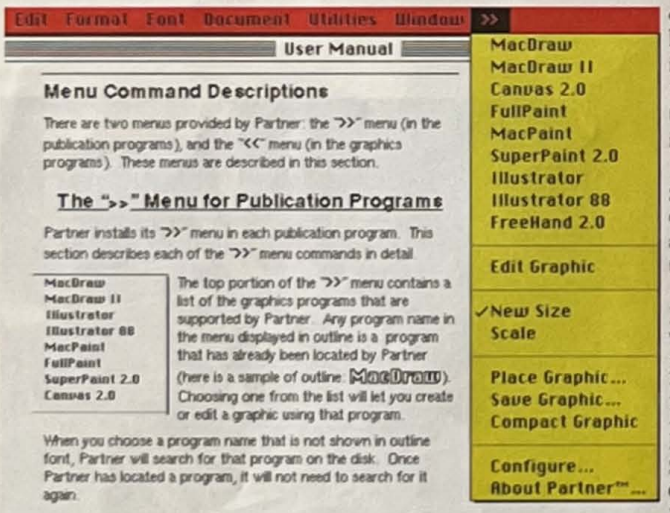
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User Manual
Menu Command Descriptions
There are two menus provided by Partner: the ">>" menu (in the publication programs), and the "<<" menu (in the graphics programs). These menus are described in this section.
The ">>" Menu for Publication Programs
Partner installs its ">>" menu in each publication program. This section describes each of the ">>" menu commands in detail.
MacDraw
MacDraw II
Illustrator
Illustrator 88
MacPaint
FullPaint
SuperPaint 2.0
Canvas 2.0
The top portion of the ">>" menu contains a list of the graphics programs that are supported by Partner. Any program name in the menu displayed in outline is a program that has already been located by Partner (here is a sample of outline MacDraw). Choosing one from the list will let you create or edit a graphic using that program.
When you choose a program name that is not shown in outline font, Partner will search for that program on the disk. Once Partner has located a program, it will not need to search for it again.
MacDraw
MacDraw II
Canvas 2.0
FullPaint
MacPaint
SuperPaint 2.0
Illustrator
Illustrator 88
FreeHand 2.0
Edit Graphic
✓New Size
Scale
Place Graphic...
Save Graphic...
Compact Graphic
Configure...
About Partner™...

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Jan. 23	CAD	Jan. 12
Jan. 30	GA	Jan. 19
Feb. 6	Scanners	Jan. 26
Feb.13	Gateways, Monitors	Feb. 2
Feb. 20	Portable software	Feb. 9
Feb.27	GA	Feb. 16
Mar. 6	GA, E-mail	Feb. 23
Mar. 13	CAD	Mar. 2

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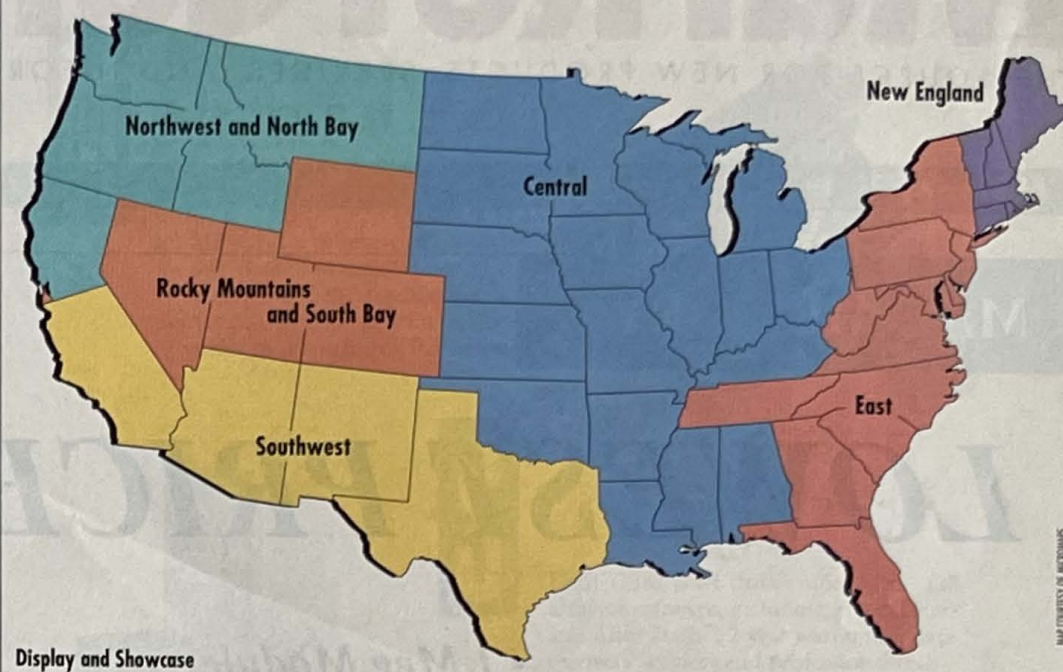

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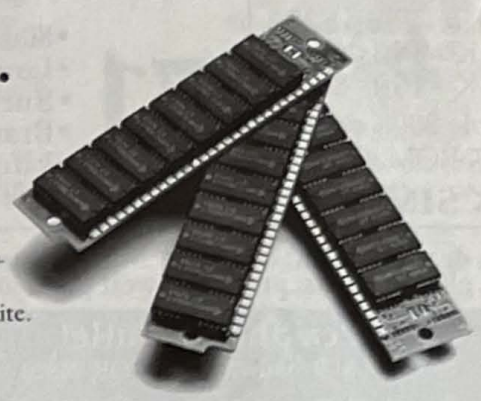

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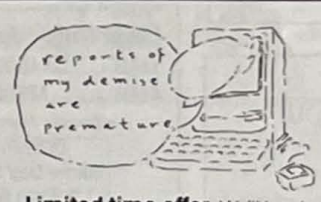
Mac Rescue™ for the Classic Mac



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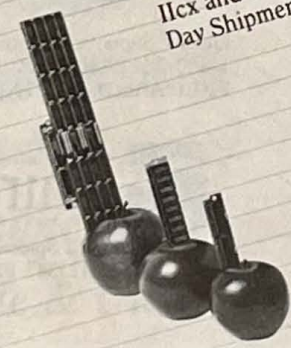

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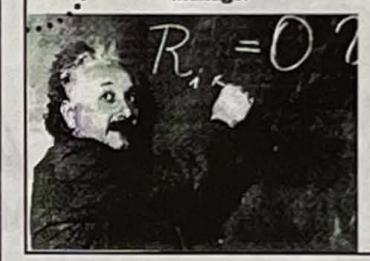

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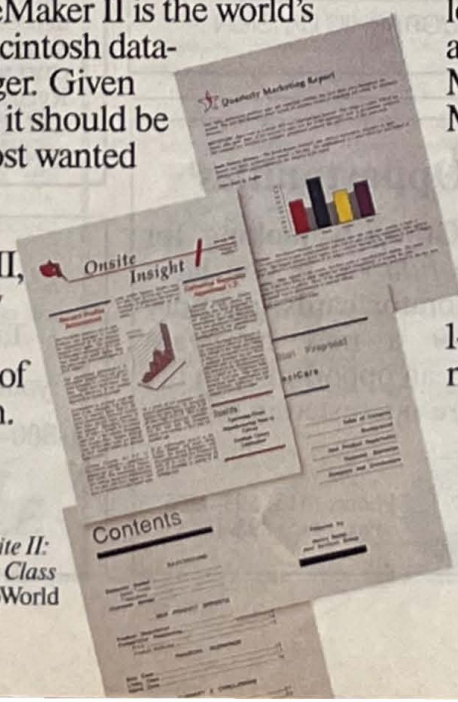

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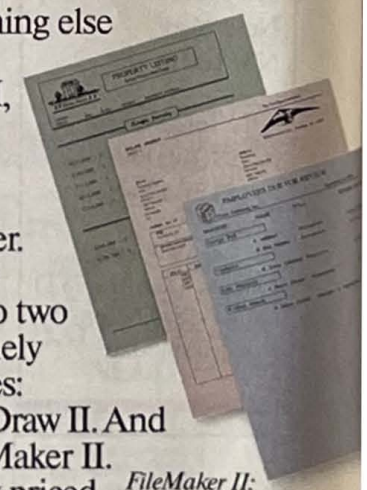

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Quickview, Apple settle HyperCard patent lawsuit

By Raines Cohen

Los Altos, Calif. — Quickview Systems Inc./HyperRacks Inc. and its owner and president, Paul Heckel, last month reached a settlement with Apple in a dispute over patent rights related to HyperCard.

Quickview holds patents on software technology for selectively hiding and revealing data, and showing common fields from different files on the same screen. Originally offered in Heckel's 1985 MS-DOS and Atari product, Zoomracks, the techniques were later incorporated into Quickview's HyperCard add-on, HyperRacks.

See Quickview, next page

Apple cites 'disappointing' earnings growth in '89 report

Cupertino, Calif. — Apple last month released its 1989 annual report to shareholders. Below are excerpts from the 40-page document:

It was a year of great challenges and great accomplishments. In fact, with a 30 percent increase in net sales, Apple — for the second year in a row — grew larger by more than $1 billion. ...

But while our sales growth was dramatic, our earnings growth was disappointing.

The most significant factor affecting Apple profits was pressure on our gross margin caused by the increased cost of goods, most notably dynamic RAM. It was a product cost increase that the U.S. computer market did not absorb. This adverse effect on gross margin diminished by year-end. ...

We increased our research and development expenditures by 54 percent to 8 percent of Apple's net sales — our highest rate ever. ...

At the same time, we are maintaining one of the healthiest balance sheets in our or any other industry, with a return on equity of 36 percent. We ended the fiscal year with cash reserves of $809 million and no long-term debt. ...

As we look to the new decade, we see a time of enormous opportunity for Apple. ... First, by expanding and strengthening the Macintosh product family, we will solidify Apple's position so that choosing these products will be one of the safest personal computer decisions anyone can make in the 1990s. [Our] present family of Macintosh computers is the industry's most stable standard. ... Clearly, Macintosh is the standard toward which other leading manufacturers are moving. And by the time they arrive, we intend to be even further ahead. ...

As far as we came in 1989, we must achieve far more in 1990. ... Because the Macintosh experience is Apple's greatest advantage, we intend to expand that product family and tell our story more effectively. ...

We must continue to recognize education as our most important long-term strategic business.

Apple is now an industry leader in computer communications, with more than 70 percent of all Macintosh computers networked and more than 2 million AppleTalk nodes installed worldwide. ...

Net sales of Macintosh family products increased significantly over the prior year, and net sales of LaserWriter family products remained strong, with both rev-

See Apple, next page

Mac consultants to hold conference in San Diego

By John Battelle

Bellevue, Wash. — The Macintosh Consultants Network announced last month that its Fourth International Consultants Conference will be held in San Diego in April.

The conference, which occurs twice a year, has become a proving ground of sorts for new products (see MacWEEK, Oct. 24, 1989).

At the Macintosh/LA conference in Long Beach, Calif., in November, the group also unveiled plans for a continuing-education program to certify consultants in specific areas of business computing.

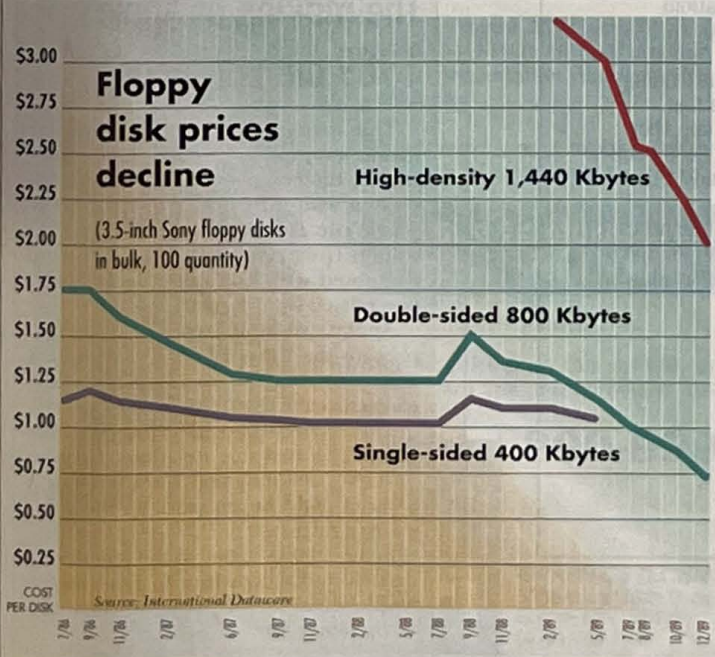
Jim Sheldon-Dean, MCN executive director, said the new program will help set standards for consulting by certifying that members are knowledgeable about products from specific vendors in particular areas, such as networking and database management.

Sheldon-Dean added that certification in solutions gives consultants and the products they use more credibility. In addition, he said, the program will give vendors "a qualified pool of people to use in situations that go beyond the normal sale of their product."

According to Sheldon-Dean, the first certificates of completion will be presented at MCN's conference April 27-29.

Registration for the MCN conference will cost $795 before Feb. 27 and $995 after that date.

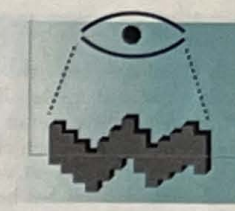
The Macintosh Consultants Network can be reached at P.O. Box 309, Bellevue, Wash. 98009; (206) 453-2729. □



High-density floppies lead drop in disk prices

San Jose, Calif. — Prices of 3.5-inch floppy disks, especially the high-density disks used by Apple's SuperDrive, have declined sharply over the past 18 months. The chart to the left shows per-disk prices for Sony bulk disks purchased in quantities of 100 from International Datawares Inc., a duplication house and mail-order supplier here. The data is adapted from the company's newsletter, the Diskette Gazette.

International Datawares Inc. is located at 2278 Trade Zone Blvd., San Jose, Calif. 95131; (408) 262-6660.



Business BRIEFS

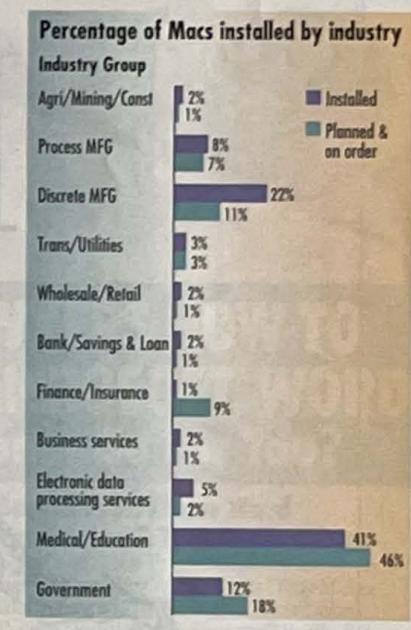
Apple Canada lays off 60

Markham, Ontario — Cutting its overall employment by about 14 percent, Apple Canada last month laid off 60 people from its sales and marketing staff. According to a statement issued by Norm Kirkpatrick, vice president of marketing at the Canadian subsidiary here, the move came after a re-examination of "emerging trends in the industry and the Canadian economy" revealed a "slower than anticipated growth rate for the foreseeable future."

One casualty of the cutback was Lois Densmore, a marketing specialist who served as Apple Canada's users group liaison. The elimination of her position provoked a flurry of protests from users groups.

Medical/education fields hold largest share of Macs in industry

La Jolla, Calif. — Computer Intelligence, a market research firm based here, late last year released findings from a survey of 12,000 sites on the distribution of Macs among the nation's industries. The largest industry grouping is medical/education, with 41 percent of the nearly 281,000 installed Macs in the survey. Surprisingly, those companies engaged in "discrete manufacturing" (in contrast with process manufacturing, such as refineries) represent the second-largest group, with 22 percent of the total installed Mac base.



Judge strikes down nation's first VDT safety law

Hauppauge, N.Y. — In a victory for employers, a New York state judge last month struck down the nation's first VDT safety law.

Passed by the Suffolk County legislature in June 1988, the ground-breaking legislation required businesses to provide adequate eye care, lighting, adjustable furniture and regular work breaks for VDT operators.

State Supreme Court Judge John Copertino ruled that the county legislature had improperly sought to supersede state and federal safety and health standards.

Archive subsidiary seeks control of Cipher Data Products

Costa Mesa, Calif. — In another step toward corporate consolidation in the tape backup market, Archive Corp. announced here last month that its wholly owned subsidiary, CAC Corp., had initiated a tender offer for all outstanding shares in one of its chief competitors, Cipher Data Products Inc. of San Diego.

CAC, which already owns 4.6 percent of Cipher's common stock, offered $7.50 per share in cash, or a total of approximately $109 million, for the remaining shares. Cipher CEO Gary Liebl said his company's board is weighing the unsolicited offer.

In March 1989 Archive acquired another leader in the field, Maynard Electronics, while Cipher took over Irwin Magnetic Systems Inc. the same month. All four companies offer tape units for the Mac, among other platforms.

Quickview

From previous page

In September 1989, the one-man company filed suit against Apple, alleging that HyperCard infringed on one of its patents. Apple countersued in October, claiming that a second Quickview patent was invalid. Since April 1989, Heckel has been offering third-party HyperCard developers royalty-free licenses for the patented technology, on condition that they make their stacks compatible with HyperRacks.

The agreement gives Quickview rights to unspecified Apple technology and grants Apple, its customers, distributors and developers a license to the patented technology.

Both parties declined to reveal details of the agreement. Sources close to Apple said that, as part of the settlement, Apple paid Heckel a six-figure sum, in addition to transferring some Mac hardware.

As an out-of-court settlement, the agreement does not change the legal standing of Quickview's patents and sheds no new light on the still-murky area of software patents.

Some industry observers saw the settlement as a strategic move against HyperCard imitations designed for non-Apple platforms. The pass-through cross-license granted under the agreement is limited to "products designed on, or used in conjunction with, Apple's products," according to an Apple statement last month.

"We will look at products on other platforms, such as Plus, HyperPAD and Asymetrix, to see if they violate our patents," said Quickview's Heckel. "If so, we will be sending letters to those companies in 30 to 60 days." □

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DIGITAL REVIEW reaches 80,000 DEC-specialists on 94% of all VAX sites and many PDP sites.

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Microcom acquires anti-virus pioneer HJC

By Henry Norr

Durham, N.C. — HJC Software Inc., pioneer in the marketing of anti-virus software for the Macintosh, was acquired last month by Microcom Inc., the Norwood, Mass.-based modem manufacturer.

HJC released Virex, the first commercial Mac virus detection and repair utility in November 1988. The 2-year-old company will become part of Microcom's software division, with Robert Capon, founder and sole owner of HJC, as vice president for the Virex product group. HJC's eight employees will remain on staff here, but the HJC name will be phased out, Capon said.

The company will release an anti-virus product for MS-DOS within the next month. Microcom also publishes the Relay communications series and Carbon Copy Plus, a screen sharing utility for IBM PCs. A similar program called Carbon Copy Mac is due later this month.

Ironically, the Mac network at Microcom's corporate headquarters was infected with nVIR just weeks before the deal was signed. Even though they knew nothing about the impending acquisition, staff members used Virex to eliminate the infection, according to Christine Washburn, the company's public-relations manager. □

Apple

From previous page

enue and units sold increasing over the prior year. Net sales of Apple II family products continued to decline gradually, both in absolute terms and as a percentage of net sales, compared to the prior year.

During 1989, international net sales grew 41 percent over the prior year, representing 36 percent of total net sales for 1989, compared to 33 percent for 1988. ...

In 1989, marketing and distribution expenses increased in absolute terms. As a percentage of net sales, marketing and distribution expenses in both 1989 and 1988 declined from the prior year, primarily because management limited discretionary marketing expenses, principally promotional activities and advertising. □

The making of Apple's 1989 annual report

The annual report Apple issued last month was produced entirely on the Macintosh, the company said. The text was written with Microsoft Word and Claris' MacWrite II, graphs were drawn with Adobe Illustrator 88, and pages were composed with Letraset's DesignStudio (see related story, Page 6).

Apple also used Informix's Wingz to prepare the financial tables and Design Science's Parafonts to generate fraction characters and registration trademarks.

The report was a joint project of the company's Investor Relations, Creative Services, Finance and Legal groups. A team of eight began work on the document in August.

Some 40,000 copies of the report were distributed, according to Jane Risser, Apple director of investor relations. *— By Henry Norr*

MarketWEEK

STOCKWATCH

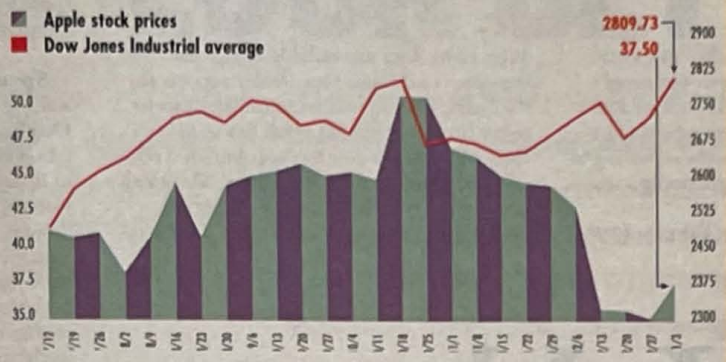
Tech stocks ring in new year with vigorous rally

After dropping sharply earlier in December, Apple and other high-tech stocks rallied in the week of Dec. 27 to Jan. 3, as investors bargain-hunted for these recently depressed stocks.

In fact, tech stocks led a vigorous rally on Wall Street, which in turn prompted investors to push the Dow Jones Industrial Average above the 2,800-point threshold for the first time.

Victors during the first week of the '90s include Adobe Systems Inc., climbing 8.97 percent; Aldus Corp., up 8.47 percent; Sun Microsystems Inc., rising 8.27 percent; Motorola Corp., up 8.23 percent; and Apple, gaining 6.76 percent.

Microsoft Corp. also got into the act, rising 3.48 percent to $89.25 a share. Microsoft's stock took a hit two weeks ago when President and Chief Operating Officer John Shirley retired unexpectedly.



Mac-related stocks

	CLOSING 12/27/89	CLOSING 1/3/90	PERCENT CHANGE	P/E RATIO	ANNUAL HIGH	ANNUAL LOW
MAC-RELATED COMPANIES						
Adobe Systems Inc.	19.50	21.25	8.97	15	30.00	14.00
Aldus Corp.	14.75	16.00	8.47	13	24.50	12.25
Apple	**35.13**	**37.50**	**6.76**	**11**	**50.38**	**32.50**
Ashton-Tate Corp.	12.50	12.75	2.00	24	24.00	8.75
Businessland Inc.	8.50	8.13	-4.41	8	15.25	7.75
Microsoft Corp.	86.25	89.25	3.48	27	89.25	45.75
Motorola Corp.	57.75	62.50	8.23	17	62.50	39.50
Seagate Technology	15.00	15.88	5.83	11	16.13	8.50
3Com Corp.	13.88	13.38	-3.60	16	28.75	10.00
INDUSTRY INDICATORS						
Digital Equipment Corp.	83.75	85.88	2.54	11	122.38	79.75
IBM	94.75	98.88	4.35	11	130.88	93.38
Sun Microsystems Inc.	16.63	18.00	8.27	32	23.00	13.00

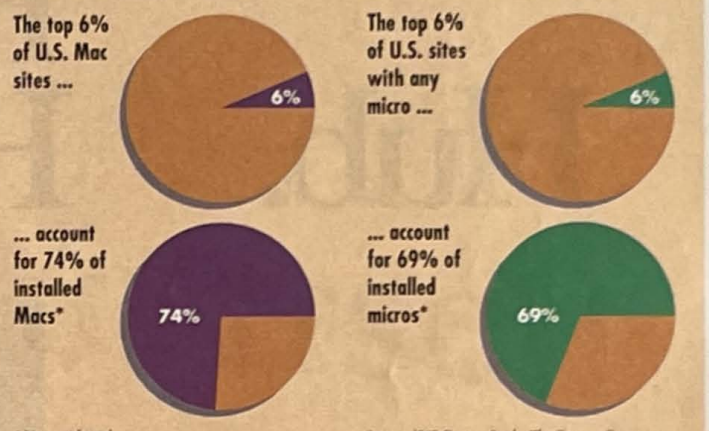
Compiled by Nordby International Inc., Boulder Creek, Colo.

MARKETWATCH

Macintosh market is all skewed up

Remember the "20/80" rule, which says that 20 percent of customers account for 80 percent of sales? Well, only 6 percent of Mac sites have 10 or more Macs, but this 6 percent has 74 percent of U.S. Macs (excluding those in farm and residential use), according to the 1989 Comtec Study conducted by The Gartner Group, a market research firm in Stamford, Conn.

The Mac market is even more skewed toward the high end than is the personal computer market in general. Sites with 10 or more personal computers represent 6 percent of all sites equipped with microcomputers, but they have 69 percent of installed personal computers. — *By Griffin Dix*


The top 6% of U.S. Mac sites ...
6%
... account for 74% of installed Macs*
74%
The top 6% of U.S. sites with any micro ...
6%
... account for 69% of installed micros*
69%

* Non-residential

Source: 1989 Comtec Study, The Gartner Group

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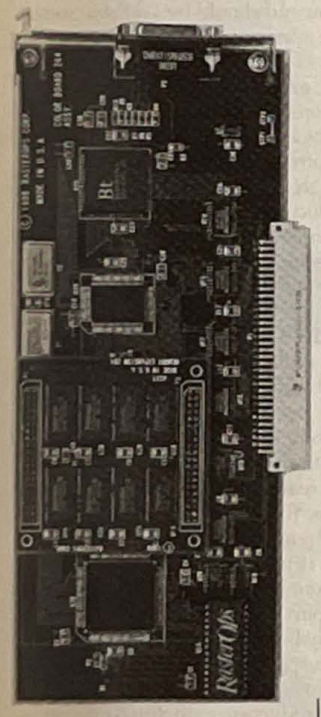

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Bear market for Portable

While many of us spent the holidays glued to the tube, thoroughly entranced by the ongoing Central American civics lesson, Mac the Knife was keeping his ever-vigilant eye on events this side of the canal.

One of the major surprises of the fourth-quarter selling season was both the availability and sales performance of the Mac Portable. First, Apple told us there was supply sufficient to meet demand. Then it told us that problems with the screen would negatively affect availability. Dealers reporting to the Knife, however, are experiencing something completely different.

In the twinkling of an eye, the supply situation went from unavailable at any price to fire-sale conditions. One dealer reports to the Knife that he sold an initial 15 units to eager buyers at full list retail price. Since then, the same dealer has accumulated 60 units, apparently with few takers. This dealer's quandary: If he dumps the bulging inventory at a steep discount, the good customers who paid list price will want his head. If this situation becomes common, the Knife is giving 3-1 odds that the Portable will quickly become a mainstay in the heavily discounted gray market.

Speed-up tricks. The Knife has been waiting since last summer to get his copy of DiskExpress II, the new ALSoft defragmentation utility that promises to keep hard disks in tiptop shape without the calisthenics previous optimizers required. At this point, though, the Knife is just as happy his copy hasn't arrived. It seems the new version, a cdev that was supposed to do its magic in the background, was tested in only one or two configurations. Now that it's out in the real world, the reports are mixed at best. It works fine for some, but more than one Knife informant has lost a hard disk to it. The latest word is that the San Francisco Bay Area's ComputerWare chain has pulled it from its shelves pending "a rigorous quality-control check."

A lucky few have found a better way to improve performance: Use one of the Mac IIxi machines Apple has begun seeding to select developers. According to one source, the new Mac with its 33-MHz 68030 is "faster than hell." It allegedly will compile code twice as fast as a IIci, while screen refresh rates are three to four times faster. Intelligence on the introduction date for this six-slot desktop screamer is still contradictory, but Mac the Knife says it's never too late to start beefing up your credit rating.

Application master. The Knife reports that Abbott Systems, known for its CanOpener desk accessory that will let you view almost any Macintosh file, has another innovative trick in the works. Sources describe the new product, code-named Copy Cat, as a Clipboard enhancer that is really an application enhancer. Once information from almost any application is copied to the Clipboard, the user is presented with a list of options, including charting, calculating, word counting and printing. The product is scheduled to go into beta testing soon and should be available sometime in the spring.

Floppy end run. Barring unforeseen complications, the Knife reports that there may soon be a solution to the thorny problem of NeXT software distribution. If the deal goes through, NeXT users will be able to visit their local Businessland dealer and download new software from CD-ROMs to their own optical cartridge on demand, thereby avoiding the cost (about $100) of buying another cartridge.

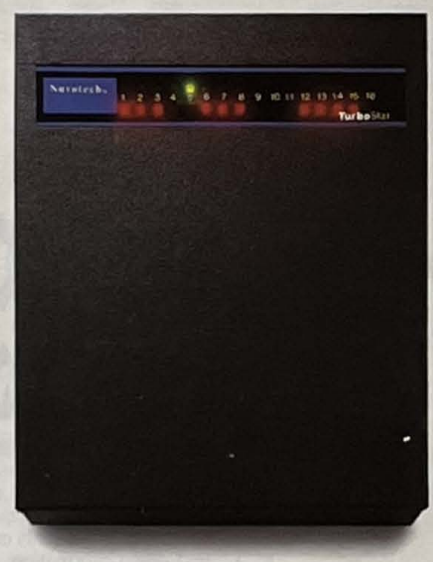
Also in the delicate negotiation stage is Kinetics' well-known interest in getting out of the hardware business. Informants privy to the talks say DEC has expressed more than a passing interest in acquiring the Kinetics Ethernet cards, and a deal is well within the realm of the doable.

Symantec finally seems to be close to getting up to speed with the long-anticipated Macintosh version of Q & A, its popular database cum word processor. Reliable sources report to the Knife that Symantec has recently been showing impressive prototypes to prospective corporate clients. Although no one would risk speculating on an exact introduction date, the Knife has learned that a major upgrade to MORE is planned for sometime during the first half of this year. □

Don't forget to exercise your democratic right to acquire a MacWEEK mug by bending Mac the Knife's ear. Call the Knife at (415) 243-3500 or MCI (MactheKnife).

Hub. Hubba Hubba.

Typical Macintosh Network Hub



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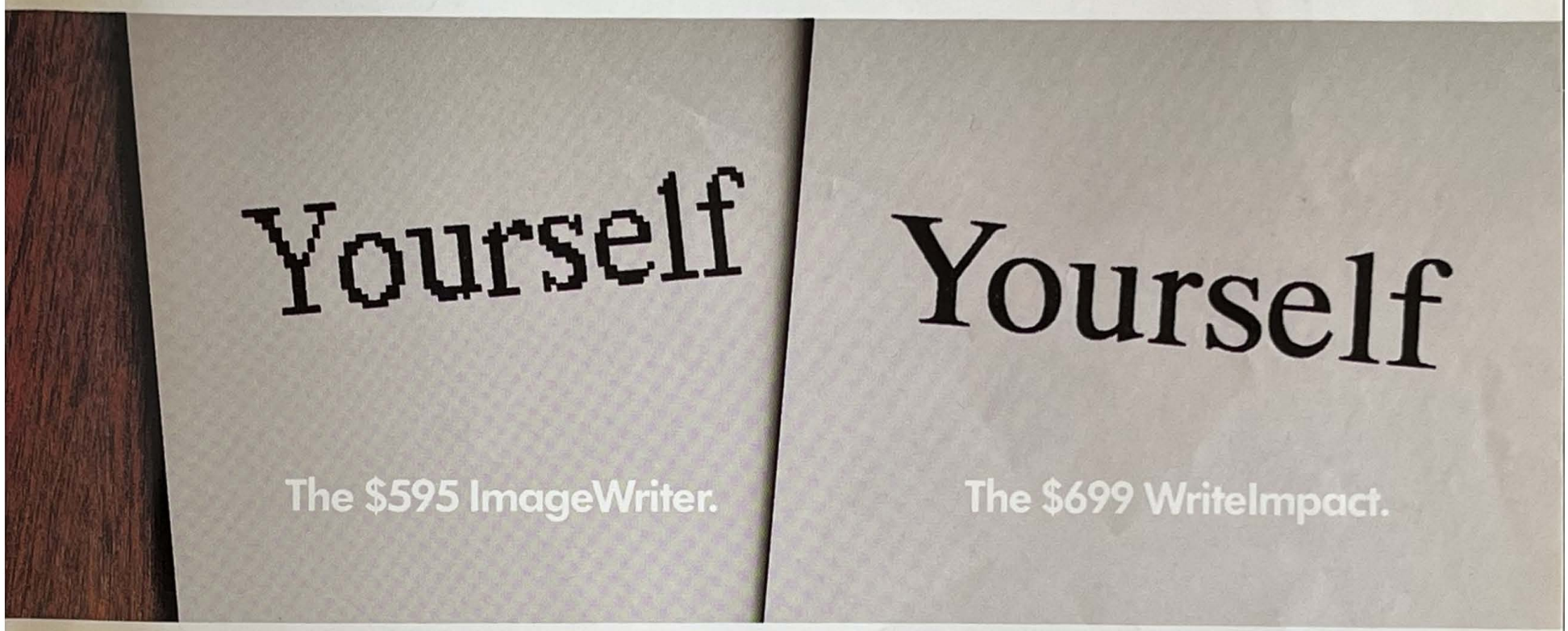

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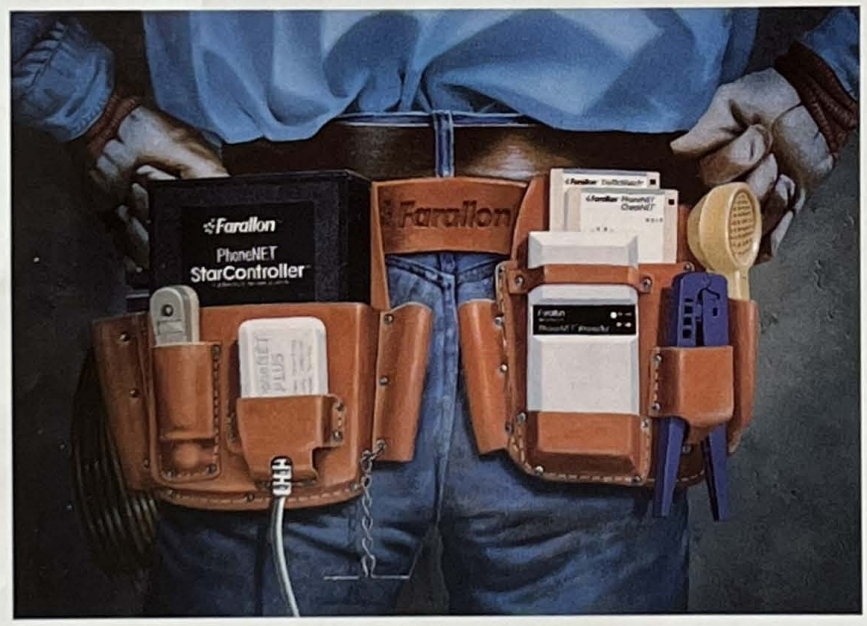

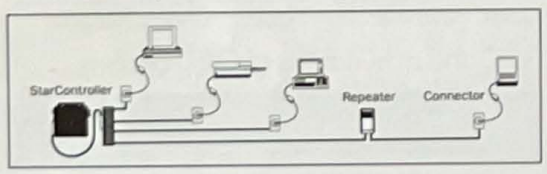

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Sure, the PhoneNET System provides an affordable way to run LocalTalk. But sooner or later, you may want to add more speed to certain parts of the network.

No problem.

Farallon's new products support industry-standard 10 Mb Ethernet over telephone wire, so you can increase the speed of those sections of the network which require more performance.

And if you're wondering how we'll fit into your long-range plans, you'll be glad to know the PhoneNET System was designed right from the start to work with ISDN.

All of which makes investing in the PhoneNET System now such a smart move for today and tomorrow.

We do the nitty-gritty.

The bottom line is, networks can be just an expensive pain in the neck if they're not wired right. So, if you're thinking about installing a new network or expanding the one you have, give us a call. Because nobody knows the network nitty-gritty like we do.

For technical support, call (415) 596-9000.

Look for the PhoneNET System logo when you buy network hardware and software products. It is your best assurance of quality and reliability.

PhoneNET System™

Farallon™

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